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WALES, LARKSPUR Plate 1

With a General Discussion of Processes

WALLACE NUTTING, D.D.

WITH
ILLUSTRATIONS BY THE AUTHOR



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### IS PHOTOGRAPHY AN ART?

Most of it is not. A vast deal of nonsense has been uttered on this subject. Highly competent artists have sometimes bothered themselves to assail the humble photographer because he poses as an artist. It is doubtless an error for a portrait photographer or any other photographer so to advertise himself. To do so is to arrogate to one's self capacities which one does not possess. The whole matter is readily settled by agreeing upon a definition of art. If art applied to delineation and color is the expression of life as we see it, then a photographer cannot be an artist, because he does not pretend to draw. The coloring of something already drawn may have art elements in the execution, but it is far better not to claim that the work has such elements, but to allow them to be discovered by the public, if they exist.

The question of originality is a ghost that rises in this connection. If the truth were told, very many artists of great ability use photographs to assist them, in their work. The smiling photographer can make no objection. The photographs that are hustled behind the scenes in artists' studios when a caller arrives should not be so hidden. If the artist is not doing anything to be ashamed of, why should he hide the photographs? He should frankly admit his debt to photography. No thought-

ful person could dispute his right or challenge the propriety of such use of photographs. Since Emerson and others have written on originality, it is not worth while for anybody to use valuable time, in which he might be creating something, to establish his claim to originality. It is often impossible for anyone to say what ideas originate in himself, or how far they are tinged or assisted by the ideas of others.

To forefend the quibble that photographs are not art, let us call them artizanship,—when they are. The secrets, to be dwelt on, may not be secrets to all who use cameras, but from an inspection of the average amateur photograph many of the statements to follow deal with things the amateur does not know, or at least does not practice.

There is in photography as in any other profession a possible difference between preaching and practice. To that amateur, who, knowing that he acts continually counter to all rules, and persists in snapping away at everything, at all hours and places, it is obviously as little use to talk as to a drug addict. People with cameras say the instruments have been paid for, and the owners can do as they like. This calls to mind the laziest man known, who used to say that the Constitution gave him the right to the pursuit of happiness. If people gain their pleasure merely from snapping a shutter, the writer begs their pardon. He has nothing to say to them. He writes to those who wish to make good pictures.

To make theories about photographs is easy. What follows is written after the author has made many millions of photographs. Possibly he is in a unique position to make generalizations.

### CAMERA

THERE is no secret about the camera. Almost any camera will make good pictures in the right hands. Otherwise any camera is useless. A readily portable and fairly rigid instrument is desirable. But no instrument can be made which will not vibrate in a strong wind. A screw adjustment, not a ratchet, for the front board, is important for quick and accurate work. A side swing is desirable, but not essential. A vertical swing is imperative, except for very short focus lenses. A reversible back is necessary.

Some small cameras are made to turn vertically or horizontally. In this case, of course, it is not necessary to reverse the back. The film pack may be used on four by five, or five by seven cameras, to advantage, with the ground glass. If, however, a somewhat different shape is wanted, like a postal card, for instance, roll film is preferable. In this case one should attach the large direct view finder, mentioned elsewhere, to the outside top of the camera. This finder hinges so as not to give much bother when the camera is folded.

Some cameras are made with a device by which the subject may be described or titled in pencil, so that a legend appears on the developed film. If one makes a great many pictures this device is an important advantage, as it requires a too great effort of memory to record accurately, afterwards, the work of a long day.

While any camera will work there is none that is good enough for a really scientific enthusiast. All cameras have their difficulties. Even with unlimited means it would be impossible

to construct a perfect camera, because certain advantages preclude other advantages. A desirable rigidity is obtained only at the expense of great weight.

Cameras are designed to meet the wishes of the largest number of buyers. The camera constructed for this purpose is a marvel of efficiency. Special requirements, however, must be met by special instruments. Thus there is the "sky scraper" camera, to be used with an extremely wide focus lens. For ordinary purposes it is just what is not wanted. In commercial photography the use of such a camera gives, used with the long horizontal, an impression of great size to a factory of moderate size. As an advertisement such a picture may please the owners of the building.

Then there are cameras, just the opposite of the "sky scraper," whose purpose is to photograph objects at a great distance, with the use of the telescopic lens. There are instances in which it is impossible to reach a point near the subject. Even in this case it may be better to use an ordinary camera, and to enlarge the negative subsequently. The field camera is made with a bellows of a length never used, or used too seldom to overcome the disadvantage of a sagging bellows, which may cut off the bottom of the picture.

The best apparatus, if the camerist has only one, is an outfit which will answer for the widest range of subjects. The hand cameras lack sufficient range in the movement of the front board. Nor are they more compact, when folded, than field cameras. In spite of the danger of vibration the author prefers a lightly constructed field camera. It has the widest range for its weight.

### THE GROUND GLASS

YES, there must be a ground glass, for really good work. Celluloid ground surface may be substituted if one fears breaks. But in a large camera the celluloid tends to warp. It may be kept true by a light strip across the center.

The purpose of the ground glass is to give a precise delineation, top, bottom, and sides, of the subject, and to secure a focus as perfect as possible. In addition there is the delight incident to gazing at the picture in the exquisite colors that appear in the glass.

To many camerists (pardon the new word) the best thing about photography is the ground glass picture. To be sure the picture is reversed, bottom side up and lefts and rights interchanged. This becomes only an incident to the wonted camerist. If one wishes to avoid this objection a focal plane shutter may be used, with a reversing mirror.

The scheme permits one to see the subject in full size, right side up, more beautiful then in nature, and up to the last instant before exposure. This apparatus is somewhat expensive, but to many persons that is not an objection. Practically, the writer seldom uses this graflex camera, because of its weight, but it is generally in use among reporters. An objection to it is that in the ordinary instrument one must look downward on the glass, thereby compelling a low level for the camera. The instrument is now made so as to permit, with an added adjustment, its use by looking horizontally. It is the ideal instrument so arranged, if one ignores the matter of portability.

The use of a finder instead of a ground glass is a poor make-

shift. But if a large special direct view finder is attached to the very top of the camera a little practice may result in creditable work.

The use of the ground glass presupposes the desire to do really creditable work. Small cameras are obtainable with the glass.

### THE TRIPOD

EXCEPT under conditions impossible for a tripod, one should be used, invariably, unless a graflex and fast work are permissible. For art photography, so called, the tripod is accepted as a necessary encumbrance.

A tripod with wing nuts can be set more securely than other sorts.

Of course, only fast snapshots can be made without the tripod, not less than a twenty fifth of a second.

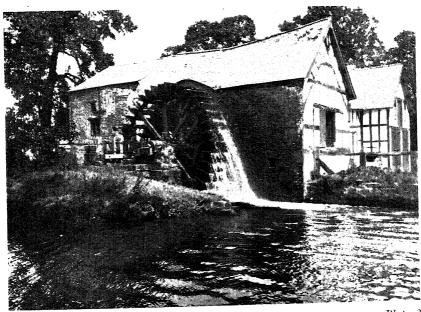
Avoid a very light tripod, since any wind at all will injure results. Also seek out a tripod which admits of long extension, because thus, stooping is avoided. A person stooping under a focusing cloth is a subject, always, for a funny sketch. But sometimes the exigencies of the theme drive the camerist to his knees, and even to prostration on his stomach. The true enthusiast will of course not hesitate even if he must stand on his head, straddle a limb, or,—what is most usual—stand on the outmost foothold of a stream bank. The camerist contemplates a bath many times a day, and the writer has taken several, without opportunity to strip beforehand.

The tripod legs are the bane of the camerist, because few tripods are made so that under pressure the legs will not tele-



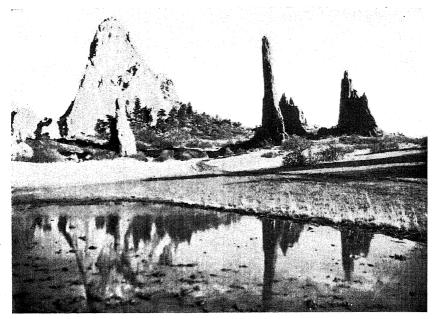
ON THE TEME, LUDLOW

Plate 2



ENGLAND, THE OVERSHOT WHEEL

Plate 3



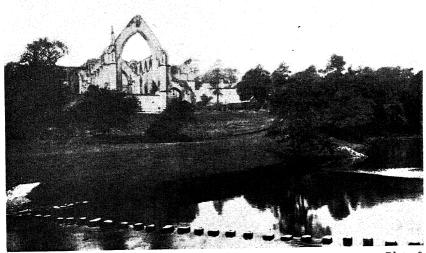
COLORADO, IN THE GARDEN OF THE GODS

Plate 4



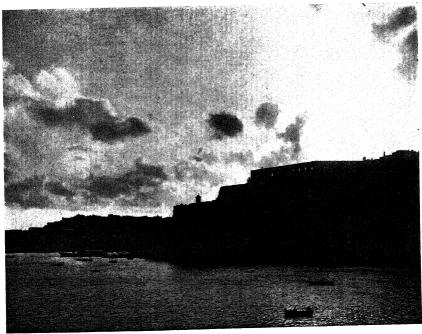
A CALIFORNIA POND

Plate 5



STEPPING STONES AT BOLTON ABBEY, ENGLAND

Plate 6



ENTRANCE TO THE HARBOR OF MALTA

Plate 7



ITALY, AMALFI Plate 8



THE TEMPLE AT PAESTUM

Plate 9



CONNECTICUT, THE SHEEP PEN

Plate 10



NEW HAMPSHIRE, MOUNT WASHINGTON AHEAD

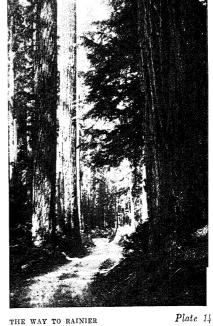
Plate 11

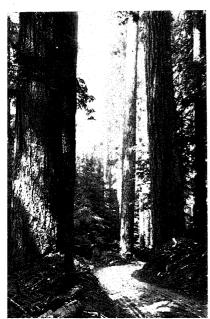




THE OREGON STREAM

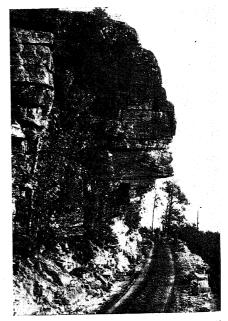
Plate 13





A WASHINGTON DRIVE

Plate 15



A MINNEWASKA CLIFF DRIVE, NEW YORK Plate 16

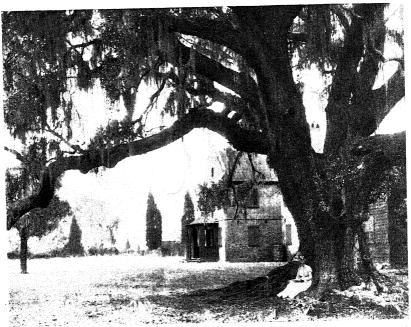


ONTARIO, AN ARTIST'S RIVER

Plate 17

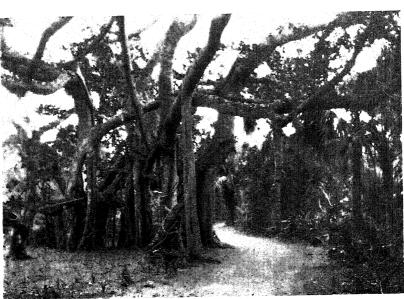


BATAVIA, NEW YORK



A SOUTHERN MANOR HOUSE, SOUTH CAROLINA

Plate 19



A BANYAN TREE, FLORIDA

Plate 20

scope. It may be necessary to have a tripod made to order, and, always, wing nuts should be used.

### THE LENS

As with the camera so with the lens, any will do, but a lens with six or eight elements is best. With eight elements lenses are separable into two parts either of which, on subjects requiring a long focus, may be used to occasional advantage.

When lenses are made to use separately each part having three or four elements, they may be purchased so as to combine with one another in different focal lengths in the same barrel. A lens box may be carried providing five or six different combinations, so as to suit the exigencies of the subject. Practically, the camerist, whether he works for pleasure exclusively, or for pleasure and profit, does not like to be cumbered. The use of the automobile, however, in picture making, makes it feasible, now, to carry a much more varied apparatus.

The focal length of a lens, the measurement from its center to the ground glass, adjusted for a distant object, is an important matter for good work. In no case, for "art" subjects, should the focal length be less than the diagonal measurement of the ground glass. With a five by seven camera, an eight and a half inch lens is the minimum for the best work. The shorter the lens focus the more distortion appears in the picture. On interior subjects if one wishes to show a large portion of a room, a relatively short focal length is necessary. A seven inch lens on a ten inch plate gives a wide angle. The terms short focus and wide angle are often interchangeable. A fallacy to avoid is that fine lenses avoid distortion on wide angle subjects. Opti-

cal laws compel distortion when a wide angle is used. A fine lens produces a clearer image, but an image not less distorted than a cheap lens produces. This is obvious to a student but a secret to many.

Wide angle lenses should be used only when necessary. Every lens distorts somewhat, but a narrow angle lens on a distant subject gives a negligible distortion.

Observe that a lens is wide or narrow angle according to the size of the camera to which it is attached. A ten inch lens on a seven inch plate gives a narrow angle. The same lens on a four-teen inch plate gives a wide angle.

It is true that lenses are specially designed for extreme wide angle work but in the production of photographs for art or beauty such lenses are to be avoided. A lens is like an automobile in this—it should not be forced to do its utmost.

### THE SHUTTER

THERE is no perfect shutter. Most shutters tend, with the almost necessary abuse of jarring, to get out of order.

The focal plane shutter is the most scientific and best adapted for the most rapid work, but it is somewhat bulky. A shutter made abroad, to cap the lens, is usable many years without adjustment, but it is awkward, and hard to keep in place. The shutters supplied between the elements of a lens are the handiest, and the most usual. A change in shutters is to be avoided, since testing of speed must be done over again.

Indeed a little search is enough to teach us that no apparatus is without defect, whether it be photographic or otherwise. Our eyes, the best lenses, to which no approach for range and

compactness has ever been made, are often very imperfect. Yet the eye is making millions of moving pictures daily. Its inch and a quarter lens, its curved "ground glass," its iris diaphragm, enlarging or contracting automatically, its ability to look against the sun, its combination of long and short focus, its self cleaning arrangements, and numerous other wonders are sufficient to fill us with perpetual reverence and humility.

Yet men have made lenses which record stars invisible to the naked eye. This is effected merely by very long exposures, and of course a clockwork arrangement to keep the apparatus steadily on its subject. The iris diaphragm of a lens leads us to the matter of the focus.

## THE FOCUS

A very wide vogue has come in for seeking the softness of a mezzo-tint by using an imperfect focus. Nevertheless, in the last analysis, very few persons really prefer a picture produced in this manner. The writer has tried the soft focus in many instances. In not one of them has he ever found an appreciable response from the public.

A better way is here suggested. Let the focus be as sharp as the conditions will allow, but let the softness of the focus, if desired, be obtained by the interposition between the paper and the plate, in printing, of a thin, transparent surface, like a sheet of white celluloid. The effect can scarcely be distinguished from a picture made with a soft focus. This method, however, has the advantage, that from the same plate prints may be made in either sharp or soft focus. The soft focus is used by some, under the impression that their work is thus more

artistic. There will be two opinions on that matter. The writer could never disabuse his mind of the idea that it is well to obtain in the negative an accurate representation of the original. The eye does not see objects in a soft focus, unless those objects are at a great distance. By using a proper sharp focus, very distant objects will, of necessity, appear in soft focus, as they do to the eye. "A haze on the far horizon, an infinite, tender sky," appear on a plate much as we see them. Skill is often attributed to the camerist, when he could not possibly secure an effect other than those on which he is complimented. We press the button, but that subtle combination of powers, in the midst of which we live, does the rest.

There is no such achievement as absolute focus. The ideal focus could be obtained only by bringing all the rays of light to a mathematical point. By as much as the diaphragm of the lens is open, by so much we necessarily depart from a perfect focus. In out of door work the sharpest focus should be sought on objects in the middle foreground, say, thirty-five feet from the camera. This will be the nearest point in the picture to an ideal focus. All objects beyond it, and on the camera side of it, will be quite noticeably out of focus when the lens is wide open, that is to say, when the largest stop is being used, as it always should be, at the beginning of focusing.

The object of focusing with the lens wide open is partly to obtain a brilliant light, and partly because if the subject can be made to appear reasonably satisfactory as to focus with the wide opening, one is certain that when the lens is stopped down, the focus will be fully satisfactory. By stopping down the lens, we mean making a smaller opening. There are, unfortunately, two systems of numbers on the openings, but by both systems the 16 stop is the same. Also, by both sys-

tems, every stop smaller than 16 requires just twice the time of the next higher. Similarly, every stop larger than 16 requires only half the time of the stop next lower. That is to say, all lenses are so arranged, that as we proceed from the widest opening to the smallest, we double the time required for exposure, with every number. Hence, after securing, by experiment, a reasonably good focus, with a wide opening, one proceeds to stop the lens down as far as the time permits. Of course, the principal object in the picture should be in good focus even at the expense of other objects. The purpose of focusing on the middle foreground is this: the focus changes with increasing rapidity, as we near the camera. Thus, for instance, if we were photographing an object in full size we should need to draw the bellows out to double the focal length. On the other hand, if one object were one hundred feet away, and another were one thousand feet away, no change whatever in the ordinary lens would be made in the focus. If, therefore, we should focus in the center of the field of vision, the objects near at hand would inevitably be much out of focus. In fact, it is often impossible to make the immediate foreground sharp, because the wind, or living objects in motion require a quick exposure, and that again means that the lens must be left with a large opening to get enough light to produce a rapid effect on the plate. This will be further explained under TIME OF EXPOSURE. Here it is sufficient to say that few subjects admit of being done with the lens wide open. In practice the stop used, in nine cases out of ten, in either indoor or outdoor work, is 16.

The only subject that will admit of a good focus, with a lens wide open, is a subject all in the same plane, and in a narrow angle. For instance, if we are photographing the side

of a building or of a room, and are directly opposite it, the subject is all in the same plane. That is to say, it is all equally distant from the camera, as much as possible. Even so, the subject is farther away from the camera at the sides than in the center. With a narrow angle, this difference in distance requires no marked reduction in the size of the lens opening, but if one were photographing at a wide angle, it is obvious that the objects in the side of the picture would be very much farther away from the camera than those in the center. This is why a wide angle subject must always be made with a smaller stop than a narrow angle subject. If one were using a fourteen inch lens on a ten inch plate when the object was not more than thirty degrees in width, it would be feasible with a flat subject, as a wall, to use the largest stop. This condition is very unusual, and is confined, for the most part, to photo engraving. In practice, there is a very wide range of distance between different objects. By all the foregoing, it appears that no picture is perfectly in focus. As, however, we reduce the opening, more and more, of the lens, we tend to bring everything into focus. Lenses are sometimes sold with a recommendation that they have great "depth of focus." This is mere quackery. The depth of the focus is increased as the opening is made smaller. But another element comes in here in focusing. The little lens with very short focus tends, like the human eye, to bring everything into focus. Hence, pocket cameras are sold with a recommendation that the lenses are of universal focus. Of course, for the tyro or the careless such a small lens has its advantages, because so far as the focus is concerned it may be said to be fool proof. But a lens of seven inch focus requires more or less careful adjustment, and the larger and more expensive the lens, the more adjustment it will require. It is a fallacy to im-

agine that, because a person has an expensive lens, it is, therefore, easy for him to make good pictures. The larger the lens the more difficult does the picture making become. Anybody can make a picture with a lens of universal focus, but it requires some knowledge to use a long focus lens. Furthermore, a lens of very long focus is so difficult to use, even by the experienced, that it is not to be recommended in the field. Many years ago the writer, under the impression that the original negative was greatly superior to an enlargement, used, in the field, a twenty-four inch lens on a sixteen by twenty plate, or even a larger size. He found it impossible to get a fairly good focus, unless he used the minute stop 256. The conditions of outdoor photography almost never permit so small a stop. Hence, if one wants pictures larger, we will say, than eight by ten size, it is better to enlarge the negative. There is a further reason for this enlargement. The bulk of a camera is a constant difficulty. Another objection to original, large, direct photographs is that, if it proves on development that the judgment of the camerist was wrong in the choice of his subject, or if his exposure was wrong, or any other technical fault hinders the production of a perfect negative, the loss is greater than it would have been had a small camera been used. Some very beautiful marines have been produced, up to four feet in length, from a five by seven negative. An eight by ten camera Ocarried in a motor is not too heavy for side trips. In fact, a couple of years since, the writer carried such a camera on his back, eighteen miles in one day, where no road existed. In a Corcamera of this size the beautiful details of a picture are shown, as it is large enough to secure a really important result, when every precaution is taken.

The subject of focusing is one which requires most careful

attention, even on the part of an old operator. Quick work in focusing is likely to be poor work. One more technical difficulty which we now encounter necessitates continual care. The operator will observe that when he has focused the center of his subject satisfactorily, the side will not always be good. It is necessary, therefore, to look at the corners of a ground glass as well as at the center of it, to be sure that the focus is right. It is well to focus on a point half way from the center to the side of the plate.

The operator must make up his mind to compromise. He is a co-worker with Nature. The sun, the wind, and the dust are generally against him. It has been well said that there are only two perfect photographic days in the year, and unless one be a professional he will probably miss those days. The camerist serves a fickle mistress. It is seldom that she is altogether amiable. When she is not frowning, or weeping, she may be dancing, or doing something else entirely other than her adorer would wish at the moment. He must watch her moods and record her beauty at the opportune time.

All the foregoing may serve to emphasize the statement that one requires a tripod. Difficult subjects may require some minutes in focusing. This is again apparent in the swing back.

### THE SWING BACK

Since the objects near the camera require a longer extension of the bellows, while the objects at a distance require a shorter extension, the swinging of the top of the back of the camera towards the operator tends to bring all objects in the landscape into focus. The picture being reversed, and the

ground being seen at the top of the glass, the swing of the top of the back away from the lens affords a longer focus for the foreground. A further advantage of the swing back is that it is possible, by its use, to adjust the focus so as to permit a more rapid exposure. That is to say, with a 16 stop one may, by the use of the swing back, bring everything into a fair focus, whereas without using the swing back a 32 or even a 64 stop might be necessary. This is particularly true in photographing animals, or water in rapid motion. The picture A WARM SPRING DAY was made in a diffused light of a May day, with a 32 stop. There was a large body of water near, permitting this stop, with an exposure of a thirty-fifth of a second. Without the use of the swing back a smaller stop and hence longer time would have been needed and the sheep could not have been taken without showing motion. In fact, the legs of sheep will move so quickly that on a negative the animal will frequently have five distinct legs, without a trace of motion otherwise, in a twenty-fifth of a second exposure! On marine views in a bright day, a 32 or 64 stop is often sufficient with a fiftieth of a second exposure. In all these remarks we are presuming that a moderate speed plate is being used.

The camerist should follow this general rule: The stop should be as small as the conditions permit. In practice it will be found that a light breeze does not injure the plate, with a 16 stop, and a tenth of a second exposure, with a fairly good light, and none of the foliage near the camera.

By the examination of a great many amateur negatives one would say that a half are under exposed and many of the remainder are out of focus.

The side swing is used when objects on the one side of the plate are much nearer than objects on the other side. The same

principle is followed here as with the vertical swing. It is not so often necessary to use the side swing, in fact, many cameras have no adjustment permitting its use. Occasionally, however, a camera lacking this adjustment is almost useless. Not rarely, both swings must be used at once, and the back of a camera on some extreme but admirable subjects, presents a ridiculous appearance.

When picturing architectural subjects, the use of the vertical swing is impossible, because the effect of its use is to give a pyramidal form to an edifice. In looking along the side of a building, however, the side swing is highly important, and the same is true when looking diagonally across a road, where the wall or fence is picturesque, and it is desired to bring it all into focus. The entire matter of the use of the swing back is deserving of extensive treatment beyond what is possible here. The study of the subject is interesting, and the earnest camerist will shortly learn by experience many little points into which it is not practicable to enter in a book.

### **EXPOSURE**

This depends on at least ten factors: The time of day, the time of year, the matter of sunshine, the latitude, the distance of the subject, the character of the subject as regards light, the movement of the subject, the wind, the speed of the plate and the number of the lens stop.

Exposure meters, sometimes in the shape of a watch, are sold, to give the camerist a proper notion of the time of exposure. Unfortunately, no meter has been perfected which eliminates the use of judgment. After one has read the meter

| Medium Plate           | 20              | 20                | 20                |  |
|------------------------|-----------------|-------------------|-------------------|--|
| Fast Plate             | 35              | 35                | 35                |  |
| Fastest Plate          | 50              | 50                | 50                |  |
| Very Dark Dell or Wood | 10              | 10                | 10                |  |
| Aluch Folisge          | 80              | က                 | æ                 |  |
| Some near Trees        | 100             | -21               | 13                |  |
| Mountains or Sea       | 10,01           | ⊷b1               | -21               |  |
| Open Country           | -               | 1                 | -                 |  |
| Heavy Clouds           | 5               | ಸಾ                | 70                |  |
| sbuolD muibəl/         | 2               | 21                | 21                |  |
| Light Clouds           | 141             |                   | 17                |  |
| Bright Sky             | -               | -                 | -                 |  |
| 6-7; 5-6 o'clock       | 62              |                   |                   |  |
| 7-8; 4-5 o'clock       | 1.65            | 4                 |                   |  |
| 8-9; 3-4 o'clock       | 1-1             | 21                | 9                 |  |
| 9-10; 2-3 o'clock      | 1.1             |                   | 31                |  |
| 10-2 o'clock           | -               |                   | -                 |  |
|                        | -               | 63                |                   |  |
| Time of Year           | May, June, July | February, October | December. January |  |

Multiply all the numbers together on time of year, time of day, condition of sky and class of scene. In other words, four numbers, and divide by the number given under the plate speed. Thus, one  $\times$  one  $\times$  one  $\times$ one divided by 50 gives a 50th of a second as the exposure in June noon with a bright sky and open coun-For every stop smaller than sixteen multiply by 2. There are two systems for marking the stops on cameras, on each system the stop sixteen is the same. Also on each system every larger stop gives twice as much light, and every smaller stop in succession gives one half the light. For instance, on the U. S. system 32 requires try and a very fast plate, and a sixteen stop on the lens. For every stop larger than sixteen divide by 2. twice the time of sixteen and so on.

it is always necessary to estimate the character of the subject. It is bothersome also, because to consult it requires time, and time is of the highest value here, as elsewhere. It is often impossible to use a meter. It is bad enough to be obliged to focus. The meter is constructed on the principle that the light will darken a piece of sensitive paper in a certain length of time to agree with the colors on each side of this paper. The use of it is not advised, owing to the various hindrances mentioned. When one is out for game it is counted desirable to bring in a large bag. So with pictures. The camerist may have one day in twenty to use his instrument, and half of the days allowed him may supply poor light. Pictures come in bevies, like game birds. One will sometimes ride for hours without seeing anything good enough to aim at, when, on a sudden, a nest of beauty is encountered, where one picture after another may be made for an hour at a time. On a ride from Exeter to Haverhill, at nightfall, a very promising theme was observed, a full stream, bordered by woodland paths and many fine trees. On returning to this subject the next morning and reaching it before five o'clock, when the soft mists were lifting and the air was absolutely still, it was possible to secure twenty pictures, each apparently as good as the preceding, in an hour's time. The first principle of exposure is that it should be as long as possible, consistent with the adjustment of the stops and the speed of the plate. It is seldom possible to give a time exposure. Of course, all exposures occupy time, but, arbitrarily, a time exposure is reckoned as one that is slower than one tenth of a second. Sometimes a bulb exposure is possible on slowly moving objects. The quick pressure and release of the bulb when the lens is set on time, gives about one sixth of a second exposure. The lens being stopped down so as to secure good

focus, the exposure is, necessarily, somewhat lengthened. The popular use of a snapshot is generally accompanied by snap judgment. The beginner would, perhaps, unless he be very ambitious, be wise to use a small camera, which does not require, owing to the short focus of its lens, much time for exposure. A table appears in this book for convenience, in exposure. The use of this table will cut out nine tenths of an inexperienced camerist's errors. After a little study, the timing of pictures may be thought out rapidly, without reference to the table. That is to say, if the subject, being an open landscape, is reckoned as one, and there is good summer's sun at three o'clock in the afternoon, a factor also reckoned as one, the stop at 16 is reckoned as two. The multiplication of these factors,  $1 \times 1 \times 2 = 2$ . This product, divided by fifty, the fast plate factor, gives an exposure of one twenty-fifth of a second. All this may seem intricate, but a brief use of the table is sufficient to demonstrate its utility. A beginner who possesses fair judgment should secure, by the use of the table, at least nineteen good negatives out of twenty.

Woodland scenes derive much of their beauty from detail. The ferns and the grasses, the forest flowers, the bark and the foliage of the trees, are all dependent for their beauty on the distinctness with which they are brought out. All such subjects should be done when the sky is overcast and a soft light illuminates everything. It is true that the tall boles of a woodland, where little foliage appears, may be done when long shadows appear. But, for the most part, deciduous trees and heavily foliaged evergreens are good only when one may see clearly beneath them, as well as above. A further illustration of this requisite for good pictures is given under The Time of Day.

### THE TIME OF DAY

A BEGINNER, when he buys a camera, is told at the shop that he should take pictures in sunshine, between nine and three o'clock. These are precisely the hours at which no photographs should be taken in sunshine, from May to September. The sun, at this season, is too nearly overhead, and throws into dense and indistinct shadows all parts of the tree, except the top. Further, all beauty of side lights is lost at such hours. The most beautiful pictures are made before eight and after four o'clock. These rules may be entirely ignored in the other months of the year, the sun being at such an angle, even at midday, as to afford attractive side lights. The available hours of picture making are gradually lengthened to approach noon on each side, as the season grows later. On the other hand, the summer lengthens the hours at night and morning, so that one is not deprived of a long session at picture making. If we travel into Alaska, northern Canada or the northern parts of the British Isles, or the Scandinavian region, we shall be able, in June, to make pictures up to nine o'clock at night. The calculation of the time of exposure becomes increasingly difficult at very early and very late hours. The time for exposure increases with great rapidity, in a few minutes, at sunset.

If the sun is shadowed, of course, good pictures may be made at any time of day even in summer unless the wind prevents. There are certain beauties brought out in shadow, which do not appear in sunlight. This is emphatically shown in portrait photography, which requires, always, a soft lighting. We are all too familiar with pictures of persons, made out of doors, where a black shadow appears over a part of the face.

It is, therefore, always a question to be determined, whether a subject is better in sunshine or in shadow. Each way affords advantages, and each disadvantages. It is surprising how often a diffused light is preferable. Many times we are unable to choose our own light. In such cases we should leave the subject unrecorded, rather than do it in the wrong light. The laws of optics are so invariable that it is silly to juggle with them. One will say, "Oh! that subject is so good I must have it, even if the light is wrong." Do not give in to such a temptation. The camerist must cheerfully admit the limitations under which he works, or he will be constantly miserable, when he might be quite otherwise. It is the part of a sane man not to quarrel with Nature.

In general, in those months when the sun quickly reaches a high point, early and late exposures produce results so fine, as compared with garish mid-day effects, that there is only one thing to do,—wait for, or rise to meet, a markedly slanting sun. Yet there are not a few days when a kindly cloud gives diffused light for a moment. If one is touring, it is better to wait for that cloud.

The matter of the time of day is closely connected with composition on account of the shadows. We will say, a picture is desired, in which a smooth lawn, or a wide, evenly growing field of grain plays a large part. Of all detestable subjects, a lawn is the worst. But catch such a subject when fine, long shadows spread across the lawn, and the subject is tolerable. A broad prospect sometimes permits shadows of clouds here and there, as over a hill slope, or a field. These are a great help. One of the worst features in modern pictures is a smooth expanse of roadway, especially a light colored road. In the old days when wheel tracks broke up the monotony, there was a little relief.

Now, unless we can get cross shadows, such a road is impossible, in sun or shadow.

There is an important advantage in early and late hours, owing to the quiet usually obtained in such hours. The wind often rises with the sun and goes down with it. A subject which is impossible all day long may be fine at six o'clock morning or evening. The timing of a picture from May through September does not vary very appreciably between nine and three o'clock. As the days shorten, the light is even only between ten and two o'clock. In June there is scarcely a perceptible difference in time of exposure between eight and four o'clock.

The best day for the great majority of subjects is a day of softly diffused light, in which everything is good except lawns and roads, the whole day long. In winter, the best pictures, almost the only pictures, are between nine and three, the hours that are taboo at other seasons, in sunshine.

## THE TIME OF YEAR

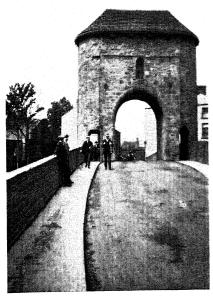
THE light in December, in the temperate climate, is only one quarter of the light in June. In mid-seasons, that is, at the spring and autumn equinoxes, the light is half of the June light. It follows that a picture in December requires four times as much exposure as in June, or put otherwise, one must admit four times as much light through the lens, and this can be done by opening the lens, or lengthening the time of exposure. One must be governed by conditions in determining which course to follow. Ordinarily, the decision is to lengthen the time of expo-

sure. But here we are helped and warned by the snow, which, if it forms a considerable feature in the picture, equalizes the winter and summer time. Indeed, a picture made indoors, where good window light is available from snow, may be made as quickly in December as in June. Sunlight on snow affords a rapid subject. Our rules for winter work, therefore, apply only when the ground is bare, and the degree of bareness must be taken account of in the exposure. Winter pictures please many persons, but I am bound to say no one seems sufficiently pleased by them. An uncolored picture, made in winter, is better, as an attraction, than a colored picture, but the admirer of pictures wants foliage and blossoms.

There is nothing more entrancing to the writer than a woodland or a cottage burdened with snow. If only the world could be made to love such themes!

The saying is that one should begin in the spring to "take" pictures, at the time when the corn is planted, when the leaves are the size of a mouse's ear. At least, earlier than this shows too great bareness of branches. A picture which afforded much delight was one showing the fine skeleton of an oak. We remember that Ruskin gained acclaim by his drawing of a tree without foliage. But these instances are sporadic. If we are too eager to begin in spring, we shall simply throw away our work, and discard our negatives later, when the glory of the year burgeons.

On the contrary, in autumn we may continue when the leaves are largely on the ground, leaving only enough on the boughs for a fine effect. Late October, and even November, in an oak country, afford much to record.



MONMOUTH BRIDGE ARCH

Plate 21

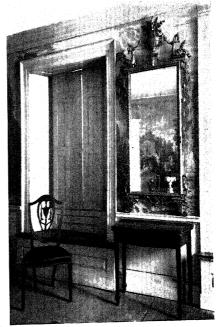


florida, evening across the indian river Plate 22



ENGLAND, THE OLD SAXON TOWER

Plate 23



PARLOR, CUTLER HOUSE

Plate 24

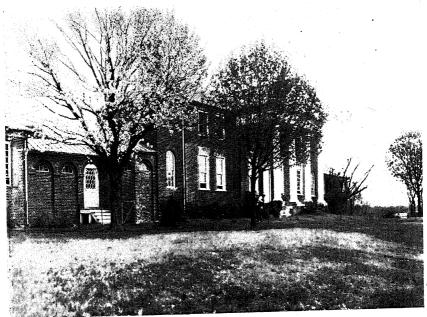


THE MILK YOKE Plate 25



FLORIDA, THE SCHOONER COTTAGE

Plate 26

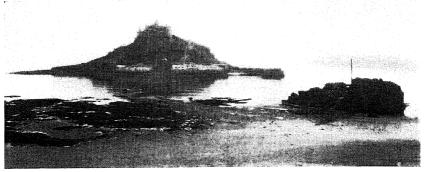


A MARYLAND MANOR

Plate 27



RHODE ISLAND, A WARM SPRING DAY



ST. MICHAEL'S MOUNT, ENGLAND

Plate 29



A VILLAGE GREEN, BIDDESTONE

Plate 30



WALES, THE TRANQUIL VALE

Plate 31

### THE DISTANCE OF THE SUBJECT

It has been learned that subjects are rapid in proportion as their distance from the camera increases. That is why a landscape negative is thicker on the horizon than it is in the foreground. Happily, this thickness, due to greater light, makes the negative print slowly on the thick part, and provides us with a picture graduated, much as we see it in nature. But, being aware, as we now are, of this law, we shall cut down our exposure, if most of our subject is distant. If the foreground is light, as calm water, in the open, the subject will all be rapid and even. Hence, if mountains or any extreme distance appear on the glass, it is well to photograph across bright water. The water, if shaded, is sometimes a black and slow subject.

A very near subject, such as trees, perhaps forty or fifty feet away when they occupy a good deal of space in the picture, require three to ten times the exposure proper for the same trees from a distance of several hundred feet.

The fastest subjects, therefore, are clouds, marines and mountains. Clouds which do not appear at all on a negative exposed for a "strong" foreground, may show beautifully if the exposure is quickened, with a fast foreground. An ordinary plate will do extraordinary work in the right hands. Under the caption PLATE further light will be thrown on this subject.

Now, the distance of the subject should not be great, unless clouds and water and mountains are to form important features. The water being in the foreground may be made interesting, if properly handled. But any other subject will require more time, and either a special plate will be required, or we may ignore the distance, as we usually do. Mountains are

fine backgrounds, but only a true mountaineer really admires them in photographs, unless something interesting intervenes between them and himself.

# LATITUDE, FROM THE EQUATOR

Obviously, as we near the poles, the light of the sun decreases, because it strikes more and more obliquely. As few camerists live in the tropics or in the arctic circle, we may dismiss this phase with brevity. The practical matter is that if one goes south in the winter, as to Florida, or Egypt, one finds the day longer, and hence may obtain good negatives earlier and later in the day than in our latitudes.

We must distinguish this subject from the latitude of the plate, an entirely different matter.

# LIGHT ON THE SUBJECT

No witticism is intended by this title, and there will be no fun in it on the first reading.

Of course, the light should always fall toward the subject, rather than toward the camera. Even when the sun does not shine, the quarter of the heavens where it is gives greater light than other quarters, except the sun be in a very black cloud. The sun need not be directly behind the camera. If it is shining in precisely the same direction as the camera points, the shadows being also directly behind the objects on which they fall, will be invisible in the camera, and all the advantage of their beauty will be lost.

A good effect is obtained if there are cross shadows, striking, perhaps, somewhere between 20° and 70° from the standpoint of the camera. Such shadows throw out the bark of trees, and other objects, into fine relief. If the sun is fairly square off, that is, at right angles from the camera, there is too much shadow. The off sides of trees become black.

The bad effect of direct overhead sun has been pointed out. The golden rule is that the subject shall have a pleasing light upon it, in every part. The softer the light, the better the details. If we have sun, we lose detail, but we gain other effects that are desirable. Animals are best made in a diffused light. Highly desirable is this same diffused light. It is the sort that makes one squint, it is so strong, yet the sun does not shine. This light is as rapid as sunlight. It is caused by a thin haze, as through ground glass. It illuminates effectively every part of an object. A somewhat duller light gives a somewhat less attractive result, yet a good result. A very black day should be avoided. In theory one should, in a dark day, obtain good pictures by long exposure. But the pictures so secured lack life, and they are seldom good, because Nature is a poor sitter, and will get impatient and rustle her garments in a very long exposure.

The light on a lone tree, or well separated trees, is much faster than on the side of a woodland. The separate object is defined by the sky on all sides, and is effectively picked out in a brief exposure. There is difficulty in securing good images where one object blends with another, each being of about the same color. In a good autumn scene, where the colors are vivid they are not so seen on the plate. The reds become dark, and disappointment will result with any plate, especially a common plate. Relief cannot be had with any lens or plate com-

parable with the contrast that appears to our two eyes. With them we get a stereoscopic effect. If we are intent on the very best photographs we shall use a stereoscopic camera. It is not generally used, because it prevents the making of wall pictures. The two eyes, being some distance apart, enable us to occupy two standpoints at once, as it were, and we are able, in some degree, to see two sides of an object at once. But the camera has only one eye. Relief is largely a matter of varying color. Something also is lost in printing. Glossy papers give the truest effects, but they are otherwise objectionable. The finest pictures are transparencies, that is, positives, or prints on glass, viewed through transmitted light, and producing wonderfully beautiful effects. Would they might come into fashion again! For this reason, the eager camerist enjoys examining his negative more than seeing the finished print, in which much is inevitably lost.

A very safe guide is the appearance of the object. If it is not so lighted that you are drawn toward it, let it pass. There are other things better, somewhere.

## MOVEMENT OF THE SUBJECT

THE picture must be made so rapidly as to hide an appearance of movement. Slight movement is not disastrous to results, especially if it be confined to a small section of a plate.

The movement increases as the object is brought near. A branch will not show its swaying at two hundred feet, in a moderate wind, and a tenth of a second exposure. But if the branch were thirty feet away its movement would spoil the plate. The movement in the former case would pass over perhaps an eighth of an inch of the plate. In the latter case the object

would be so much larger that, in the same time its movement might pass over an inch of the plate. Put in another way, it would admit an exposure of only an eighteenth of a second, provided a tenth of a second was the fastest allowable exposure in the former case. In other words, the subject would be impossible. The nearness of the subject would make it slower, but what is required is a speedier exposure.

In practice one must often wait for a lull in the wind, and hold the bulb in hand, for exposures should be made with a bulb or a wire piston, for the touch of a hand directly on the shutter causes a slight jar. Sometimes patience is sorely tried. If the subject is good enough, one may sometimes wait, literally "till the cows come home."

Animal pictures are best made when the animals are approaching the camera, as less movement thus appears. If animals cross in front of the camera the subjects are nearly impossible. A flock of sheep feeding away from the camera is not as a rule attractive. One needs fine light for animal photography; especially as a herd at a distance is not worth while. Each beast becomes too small for the composition. When the animals are nearer the speed of making must be rapid. Hence, a negative made by the author in a light rain, of sheep under an apple tree, was too thin. The best nursing we could give it in development still left something to be desired.

You will "see by the papers" how someone has made a picture of a cannon ball in full flight, in a two thousandth part of a second. An engineer in the army would be very much interested in such a subject, but it would not be a picture in the sense you require. Very much misapprehension exists as to rapid photography. The more rapid the plate, the poorer it is, and the less richness it has. Of course, the cannon ball, or the

place where it will be, is focused upon. Nothing else will be in focus, and the ball will certainly show motion.

Practically, the fast plate will make a good marine under favorable circumstances, in a two hundredth part of a second. But the lens will be wide open, and the subject, therefore, not well focused. A hundredth of a second is all that can fairly be counted on, therefore, with a proper stop. Again, the best marines are shore subjects, in which rocks show. The rocks are wet, and hence dark, often black, and will not come out fairly, in less than a fiftieth of a second. Yet, we are talking of fast subjects! One at work, in a fine light, almost never uses a speed on anything, other than a marine, of less than a fortieth of a second. Many landscapes, restricted, require from one to ten seconds, as a deep dell, or forest path, with a 32 stop.

Yet movement gives some part of their notable charm to certain subjects. A water scene is never good, when the water shows a perfect image, so that the picture is doubled. A slight rippling of part of the surface, showing broken lights, will make a picture, where none was before. It is no skill to double a picture by reflexion. The skill is to make the water look like water, and not like a mirror. In a very still day, therefore, one should throw several pebbles into the water, at scattered points, so that when the ring ripples meet they will break up and afford a dreamy, mysterious surface. Standing with bulb in hand, press at the right instant before full quiet is restored. One cannot get in this manner an effect as natural as a little wind gives. It is particularly important not to make one great ring. The effect is too obviously artificial. What we want, in trees, animals and water is the suggestion of motion but no motion on the plate.

A stiff wind causes so much vibration that only a very rapid

exposure can overcome it. One may sometimes shield the camera by holding a coat, held out like a sail.

Water in an ordinary wind is not a bit beautiful. The result on the plate is a surface of even, monotonous texture. Of course, great sea waves are beautiful. But the sea, or fresh water, marked by small waves does not give good results. A wave that affords neither broken reflexion nor majesty is to be avoided. If the water surface is not beautiful, the camera cannot make it so.

The effect of snow storm, in strong light, may be caught, and even rain may be made to show for what it is.

In photographing clouds, with a color screen, one may, on a dull day, give an exposure so long as to lose the sharpness of detail.

The obstacle most commonly met with is the wind. On account of it one must meet trouble almost every day. Almost half of the good subjects must be lost because of wind. On many days scarcely a good negative is obtainable. On a perfect day at the Killarney Lakes fifty large negatives were possible. In Ireland, as a rule, it is too dull for good photographs. It was a wonderful summer we had there.

Then the sun will be wrong rather more than half of the time, because we can look, in sunlight, at less than half the horizon, at any one time, for the best results.

What between wind, sun, dull weather, dust and the people who wish to appear in the picture, the way of the camerist is hard. That is why the game is so fascinating. Good results must mean that there is, as in war, a good man behind the gun. You can pit your wits against conditions, and by one device, or another, early or late, can record the beauty that never cloys.

There is to be sought an effect like what the eye sees. When

we photograph sea waves too rapidly they show a spatter that the eye does not discern. Again, if we make the exposure too slowly, the waves will move so as to blur the plate. It has been calculated that the eye picks out an object in about one tenth of a second. An exposure very much shorter than that gives an unnatural effect to moving objects. It is a case of compromise. A twenty-fifth of a second may be allowable when too great movement would show at a slower exposure. The eye never sees a wave really as it is, but the effect of movement shows, in the eye, owing to the slowness of vision, and we derive an impression of softness which is really lacking in the subject. As a result of all this a photograph made when the sea is running very high in a wind is quite unnatural and must often be discarded. The best time for a marine photograph is after a great storm, but when the wind has died. The effect then, of an oncoming wave will be that of an oncoming animal. It will not show motion comparable with the degree of its speed. For these reasons it is well, when a very fine marine subject is found, to make three exposures upon it, one rather rapid, another medium, and another slow, ranging, we will say, from one twentieth to one fiftieth of a second. A comparison of the negatives produced will teach the camerist a great deal, and will put him in a position to choose, in the future, the best speed for that particular class of subjects.

The same method of testing is good in reference to wind or foliage. It is essential that a camerist should school himself to see with the eyes of the camera. That is, he must learn to estimate the foreshortening of the camera, so that he may judge of effects near at hand and at a distance, not only as regards size, but also as regards motion. Careful observation on the

ground glass of moving objects near at hand will give a vivid training.

A person recovering from a fever is greatly distressed by the slowness of effect on the eye, in this manner: If the eye is fixed on a figure in the wall paper and then quickly shifted to another part of the paper the figure at which the eye was looking will appear to move on the paper. The impression had so "developed" in the eye that it did not instantly die away when the eye was shifted. The same thing happens, though more quickly with normal vision.

### THE PLATE

A PLATE is spoken of as the surface—whether film or glass, prepared for exposure. Plates vary in speed many fold, but a plate of any given speed is wonderfully uniform. A plate just a little slower than the fastest gives the best average results. It is richer in silver, and affords better gradations. One must decide what sort of subjects one will seek. A very rapid plate, for some of the purposes already described, is a requisite.

A plate consists of microscopic particles of nitrate of silver in an emulsion of gelatine. A richer plate is made by coating over the first application with a similar or identical emulsion. The effect is this: on exposure the strong lights penetrate deeply into the second emulsion and are mostly absorbed there. The technical name for the strong lights is high lights. The effect of a double coated plate is a finer gradation, with less of clear black and white, but more of intermediate, or half tones.

Hence, the double coated plate is to be recommended for general use, although it is slower than the single plate.

Further, the double coat avoids halation, the name given to the diffusion of light on a thin plate, as about windows, or "holes" in a forest view.

Some plates are backed. That is, they are covered on the wrong side with a red, or other dark preparation, to overcome halation. Nowadays, when the trend is so properly toward the use of films all these troubles are overcome. For the film, being thin, affords little room for halation to occur. Cut films, of a richer texture than the roll film, can be bought, and are much to be preferred. The impatience of the amateur hastens him to expose his entire roll, so that he may have it developed at once. With cut film there is no such temptation. One is then permitted to focus his attention (more important than focusing the camera) on the single subject before him, with the intention of making it the best thing that ever was done.

There is a choice in speed also, in films. The next to the fastest is best, because it affords more latitude in exposure. The term means that it allows a variation from the right exposure without harming the quality of the result. If one second is the absolutely correct exposure, an exposure of a half second or of two seconds will afford, on a medium plate, a negative that can scarcely be distinguished in quality from a negative correctly exposed.

In fact, if we could secure photographs only by full precision in exposure we should fail most of the time. Exposure depending of necessity on judgment, in a degree, one would require to be wiser than it is given to man to be, for achieving good results.

A quality in plates now procurable is that of giving nega-

tives in gradations of tone representing the various colors. These plates are called orthochromatic or isochromatic, from Greek words signifying respectively true color and equivalent color. These plates are dyed, and viewed (as they never should be, however) in the dark room, before exposure, are of a pink color. Their effect is to give dark grays for yellows, instead of black, as in the ordinary negative; and light grays for blue, instead of white. All intermediate colors are shown in soft shades of grav. These plates are the important modern contribution to art photography, and should be universally chosen. They are somewhat slower than the ordinary plate, but their other qualities overcome that objection. They can be obtained best on glass, but to some degree on films. They enable the earnest worker to achieve something really worth while, and they are necessary to obtain good skies. The names under which they go are trade names, but under either name they are good.

A full color rendering, that is a more accurate reproduction in tones of gray, is obtained in a panchromatic plate, signifying "all colors." These plates are chosen for flower work, or the copying of oil paintings. They are not as good for general work, as their gradations are often too soft.

Warning is given that all these special plates are especially sensitive to yellow, and to some extent, to red light. It is well to load these plates with no light whatever in the dark room, as we soon learn to do, readily. Also, in developing, the plate should be placed in the developer and rocked for a half minute before the red light is used.

Final attainment of the best results with clouds and gardens is secured by adding to an equipment with "iso" plates, a color screen. This is a piece of glass in a frame or flange made to fit over the front of the lens. Such screens are made in varying de-

grees of density, beginning with very pale yellow and increasing to strong yellow through three gradations. These devices are inexpensive and convenient. Ordinarily only the pale yellow screen is used, because the object is to reinforce the effect of the "iso" plate. This sort of plate must always be used with the screen or no picture will result. Used on an ordinary plate the screen would require very many times the ordinary exposure. With an "iso" the exposure should be three times as much as without the light yellow screen. Screens are marked to show how many times the exposure should be multiplied. With good clouds the special plate and screen should give beautiful effects.

The name screen signifies that the higher lights of the spectrum are strained or screened out. The foreground of green is little effected. Thus, one may take sufficient time in exposure to bring out the shadows and the greens without overdoing the sky, which would otherwise be very thick on the negative, and would print white.

If one were to color prints the use of the screen would not be so important, as the water colors would provide a sky. In fact, the screen is bound to gray the sky, so that, in coloring no good blues can be achieved. One needs a white sky to secure good blues. Done on a gray sky blues are muddy and dull, and give a picture lacking brightness and cheer.

If the picture is to be left in the gray, the results by the screen are incomparably better than without it. An excellent screen is made with a strip of glass shaded from light to darker yellow. The light from the sky comes in on the upper half of the lens. If, therefore, a screen of graded color is so adjusted that the upper part of the lens has a stronger and the lower part a lighter yellow in front of it, the result is to equalize the effect on the plate and to produce a picture about as the eyes

see it. One should be careful not to displace the lens far from the center of the plate (by raising the front board) or the effect will be a dark corner in the sky. On rich flower subjects the screen redeems what would otherwise be a useless negative.

The ordinary plate forbids our putting much sky in the picture, because the sky is blank, unless a quick negative is made, with a fast foreground.

In copying it is better to use a slow plate, often called "commercial." Plates are graded from 30, the fastest, downward through 27 and so on to very slow. Time is not so important in copying as in field work, and a "commercial" plate has a very wide latitude of exposure, and gives better results any way than a fast plate.

When great contrasts are required we use what goes under the trade name of contrast plates. If a negative is flat the copy may be made better than the original by exposing and developing for contrast. The contrast plate is too black and white for ordinary work, but for extreme results, or for copying drawings, it is the only thing.

Manufacturers do not yet produce a roll film in a quality as good as is available in heavy cut films and glass plates. Yet there are occasions when one must use a roll film, or nothing. With proper light and exposure, one can obtain very fine negatives with rolled film.

The film packs are cut films arranged in dozens and while inferior to heavy films, are preferable to the roll film, because they permit the use of ground glass.

With a five by seven cut film a negative of a thatched cottage, beyond a garden, was produced, of a quality such that copies up to fourteen by seventeen inches were made, and of such popularity that hundreds of thousands were printed.

Great care is necessary in pulling out the black paper, after exposing a cut film. A black cloth should shield the end where withdrawal is made. Otherwise fog may result. The cut film is more readily reloaded than the roll (spool) film, and has the same merit of compactness. In a week's trip an indefinite number of "exposures" may be carried without taking up much room.

The size of plate, already touched on, must of course be such as the camerist finds best for himself. Giving the results of experience, the writer carried on one foreign journey a five by seven camera with a fine eight inch lens, and cut films in film packs. On a subsequent journey he carried an eight by ten camera, a ten and a half inch lens, and heavy cut films, in separate holders, loaded like glass plates. A larger proportion of good negatives was produced with the larger equipment. Few persons can resist the temptation to expose a small film, on any occasion, or no occasion. The larger apparatus is likely to conduce to more careful work. The best record was 149 usable negatives from 150 exposures.

It requires a good man to make no mistakes. The man who never makes a mistake never makes anything else. Once in a while most of us make two exposures on one plate. In one instance we have a handsome cow standing very nicely on a still handsomer sofa—two perfectly good beauties spoiled! Another error is forgetting to stop down the lens after focusing.

Many cameras are produced with a more or less effective substitute for a focusing cloth, formed by opening the back, or by full protection in a graftex camera.

A thick and ample focusing cloth of velvet, or, more compact, of soft dull wool "satin" is advisable. Sunlight is so penetrating that it is always safer to screen the camera back with

the cloth not only when withdrawing and inserting the slide, but during all the time the slide is withdrawn. The case of plates should not be allowed to stand open in the sun.

Roll films and cut films will, rarely, buckle and injure the focus. Loaded films or glass plates carried for a long time before using are liable, through vibrations of the slide against them, to develop with small holes. This is especially exasperating in cloud negatives which are ruined by this blemish. Common plates may be retouched successfully.

Another cause of little holes in a negative surface is dust in the dark room. Plate holders should be knocked and cleaned beforehand, and dust allowed to settle. The brushing of plates to prevent dust is not advised. The very brushing electrifies the surface and causes dust to stick. Turn the plate face down and rap it with the fingers, on the back, before loading. The touch of fingers on the film side will injure and may ruin, a plate. A dry hand, such as some have, is least dangerous. But there is no necessity of touching anything more than the extreme edge of a plate. Finger marks are a disgrace.

Ancient plates are to be avoided, but plates are good, ordinarily, beyond the safe date marked on the box by the manufacturer. A moist place is bad for plates, in hot weather.

A plate is sometimes blamed when an unclean lens is at fault. Lens surfaces are delicate. They should be softly cleaned if dirt appears, with fine old linen or delicate tissue paper. Dust should be brushed or flicked off, not rubbed in. The back of the lens should not be forgotten, nor the inside of the camera, which soon becomes very dirty. Not a plate in thousands is defective. If poor pictures are produced, find the man who produced them.

Camera bellows wear out, and accidents, also, may puncture

them. Examine the inside of the camera carefully for light, with the lens closed, with a strong daylight, and a carefully closed-in black cloth. Small holes in the lens board or the bellows, will, after a moment, betray themselves. Temporary repairs may be made by sticking on bits of black paper. The author ruined a large number of plates, on a foreign journey, by leaks which developed, without his knowledge, in an old bellows.

### COMPOSITION

Tennyson once asked Birket Foster why artists always chose old rambling cottages, rather than new, to paint. The reply—that nobody likes a straight line—was sufficient for the moment.

The fact that Tennyson asked such a question indicates that brilliant minds, of the richest culture, may overlook the most obvious elements of composition. Once, on being asked how he did it, a successful camerist replied, "Oh! it's just pointing the camera." The questioner said "Oh!", but the answer did not reach him at all. Pointing the camera is composition, and composition is everything. The mail is filled with letters—"What camera, what lens, what paper, and so forth, do you use?" All these matters are of no account, unless the composition is worth while.

Composition is largely a gift, but attention to some of its aspects may make many camerists succeed where they have failed.

An occupation is interesting in proportion as it challenges the mind. The sky, sea, plain, all call us, "Can you record our



AT ST. MARY'S, TAUNTON, ENGLAND

Plate 32



A STREET BORDER, ENGLAND

Plate 33







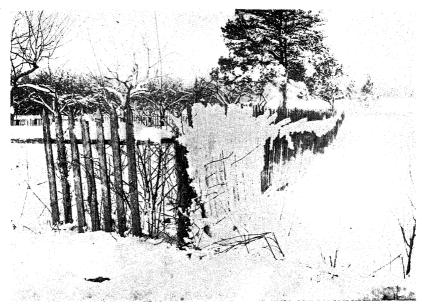




FLORIDA, THE ROYAL PALM

Plate 36 ON THE AVON

Plate



RHODE ISLAND, CURLING SNOW FINGERS

Plate 38



NEW JERSEY, A CANAL CURVE

Plate 39



RHODE ISLAND, CHRISTMAS WELCOME HOME

Plate 40



THE ABBEY BY THE STREAM

Plate 41



THE SMOKE OF EVENING FIRES

Plate 42



FLORIDA, OAK AND RESURRECTION FERN



WAY DOWN IN DIXIE

Plate 44



RHODE ISLAND, A WALK UNDER BUTTONWOODS

Plate 45



FLORIDA, SOUTHERN CHARM

Plate 46

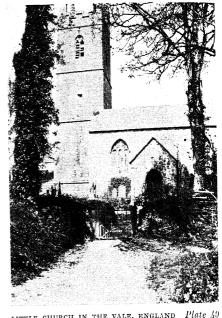


ROCK LEDGE, FLORIDA

Plate 47



ENGLAND, THE PURPLE DOOR Plate 48

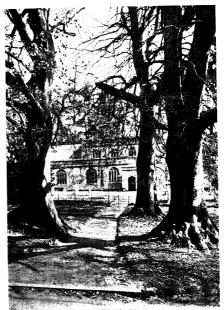


LITTLE CHURCH IN THE VALE, ENGLAND  $\ Plate \ 49$  ,



ENGLAND, NETHERCOTE COTTAGE

Plate 50



STOURHEAD CHURCH PATH, ENGLAND

Plate 51

moods, can you imitate our beauties, can you so represent us that men will enjoy the representation?" It is little enough of natural glory that we can catch. All the more reason to grasp lovingly at any fragment of it. The appeal of the world to the man depends on the man. There must be something of the ocean, something of the forest, in the soul. The greatness of the appeal depends wholly on our responsive faculty. The deep without calls to the deep within. If there is no deep within, how can creation speak to us?

The joy of living consists in understanding this wonderful world. Let a child be led, blindfolded, into a forest glade, and let the wonders around him be suddenly revealed. Give the child three minutes, take him away, and at a distance ask him what he has seen. The answer will indicate the degree of growth in the child mind, plus the degree of observation.

Of course, observation is a high essential in composition, but it must be observation of the complete picture. The scientist may stop with details, the poet or the philosopher must see the whole.

Perhaps the first principle in composition is that the subject must be viewed sympathetically. If you do not love it, you will not record it. How many millions of cameras are laid on the shelf, because "there is nothing to photograph!" Finding the subject rests with the camerist. The camera cannot point itself.

Nobody who believes the subject is uninteresting will ever make it interesting.

How much sky, and how much landscape shall appear, relatively? The reproduction of a painting appeared, recently, in black and white, in a newspaper. There was, by careful measurement, ten times as great a width of sky as of earth! This is an extreme instance. Now the original had some excuse for

this vast overhead expanse, owing to the opportunity for color. It was a sky picture, if you please, and perfectly legitimate, and interesting in proportion to the beauty (or menace) recorded in the sky. The camerist could never go to this extreme unless he were using plates and a screen designed to obtain fine cloud negatives.

The isochromatic plates and screens, treated elsewhere, being available, the camerist will be in a position to catch on his plate any fine sky effects. The great principle is that very little blank sky should appear in any negative. The camerist must never think of himself as an artist in the usual sense. If he intends to attempt color on his prints he will, of course, include more sky than he would do in the case of a black and white print. Obviously, any extent of plain white sky is objectionable. It forms no part of a picture. Composition consists in cutting out, as well as taking in. A subject which would lack interest as an eight by ten, might be attractive as a six, or even four by ten. Many days, the skies being cloudless, one must ignore it, and picture merely the landscape. Even the isochromatic plate will merely gray a white sky. It cannot give clouds where none exist. As a rough rule, we may say that two thirds of a gray print should be landscape. Of course, tree tops or hills run up into the upper third, or sky. When clouds show, even though they are very fine, probably not more than two thirds of a print should be sky, otherwise we shall run to extremes. And here a grave warning is due. The lens foreshortens. It presents a mountain range with elevations much reduced below what the eye sees. A distant range, which has an attractive look, may flatten out on the ground glass, so as to lose all its interest. Probably no principle in photography is more forgotten than this. Tell yourself, continually, "This sub-

ject will not appear on the negative as I see it!" How will it appear? Only experience can tell you, unless you view the subject on the ground glass. This foreshortening is the reason for avoiding panoramas in camera work. They are never interesting.

However beautiful a mountain scene may be, the foreground must present strong features of interest, or the picture will be bad. A mountain seen across a plain is an impossible subject, as a composition, unless there are very beautiful grasses, strongly emphasized. Even so there is felt lack of sufficient interest. It is compulsory on certain subjects to cut off the tops of trees. The composition may be so good in other respects that this cutting is the less of two evils. Again, the camerist may find it impossible to go back far enough to include the tree tops. On a well wooded road, one must begin somewhere, and the first tree tops will be cut. The same is true in forest paths. A tree should be studied and the front board so arranged as to include the first great limb. The trunk of the tree and this limb form a partial frame for the picture. It may be that the upper branches are not good, and one is glad to exclude them, To cut off a tree so as to make a stump of it, is to be avoided, at all events, in an art subject.

The bottom of the picture, the forground, requires more attention than the sky. Nearly all beginners include too much foreground if the camera is held in the hand, because that position is too near the ground. One of the best features of tripod work is that it enables us to cut out objectionable foreground. The objection may not be to the foreground, as we see it, but as it appears on the plate, where it is much exaggerated. A blank road, lawn or featureless field may spoil a picture. Even when the camera is set high, with the longest extension of the

tripod legs, and the front board is raised (by the screw adjustment) all it will bear, it may still be necessary, for artistic results, to cut something from the bottom of the print. A subject would be better passed by if after all these adjustments the foreground remained uninteresting.

A technical point omitted from the chapter on lenses, because it is better treated here, is the adjustment of the front board.

Suppose the board is centered (there is, or ought to be a mark on it) so that the lens is directly opposite the center of the plate. The lens will then cover the plate with a fairly even lighting. As we depart from the center of the plate the lighting becomes somewhat less strong, at the bottom of the ground glass.

We must not be governed by the failure of plate and camera makers. The French size, seven by ten, is far more artistic than our size eight by ten, which is rather too square for most subjects. As we cannot buy stock cameras seven by ten, we are reduced to the device of getting this shape through trimming the print. It is a nice matter of judgment how much sky to include. Ultimately it depends on good taste. We are supposing that a lens is being used, ample to cover the plate. Displacement of the lens from the center of the plate by raising or lowering, is obviously calling upon the lens to cover a larger plate than that being used. If we displace the lens, say, two inches, by lifting the front board that distance we ask the lens to cover the plate adequately, at the bottom. As, of course, the image on the opposite side is cut off, by as much as the plate is raised, the raising of two inches is asking the lens to add to its capacity two inches at top and bottom. And, as plates increase on all sides proportionately, we end by asking a lens on an eight

by ten plate to cover a plate twelve by fourteen inches, or, in practice, an eleven by fourteen plate. Therefore, the lens used on an eight by ten camera, with a displaced front board, should be adequate to use on a larger plate, when the front board is not lifted above the center. A good lens whose focal length is marked at about ten inches will bear a considerable displacement on an eight by ten plate, but there will be a noticeable falling off in light on the bottom corners. Note that these bottom corners are sky, because the subject is reversed. It is possible so far to displace the front board, with a plate and lens ten inches each, as to fail entirely to cover the corners of the sky. This failure may be ignored if one intends to trim off a couple of inches of sky. But the practice of demanding more of a lens that it can do well, is bad. The greater ease of focusing a ten inch lens often makes its use more convenient than a fourteen inch lens. That is, the larger lens requires for outdoor focusing, a smaller stop, and therefore, longer time than the smaller lens, and the time may not be available, owing to motion of the subject.

The foreground, then, must be interesting. The foreground is at least ten times as important as the background. Indeed, if the foreground and mid-distance are not interesting why waste the plate? We are not making pictures for the good of the dealer in plates.

If much foreground is shown, focusing becomes increasingly difficult, unless the swing back is used. Anything in the foreground that is out of focus is instantly noticed as a blemish, whereas the background, being lost in the soft distance, may not matter so much. It is all a matter of judgment. If sky, or lofty trees are interesting, and the foreground is fascinating, the camerist is often at a loss, because he cannot have both, in

full. The swing back cannot be used if trees rise near the top of the plate.

Some little object in the foreground which can be included in a corner may add interest. The artist would paint in a cherub, or a dog—egregious combination!

We now consider the sides of the picture. We are fortunate to find one of the two sides interesting. That will do very well. We shall travel a long way to find the perfect composition.

A tree, a great rock, a hill, a fence, should be sought for one side at least. However, the side is not as important as the top and bottom. If there is nothing good to the picture, let us not set up the camera. Roads, paths, or tree settings, at times, afford a frame so that all sides of the subject are good. It is fine fishing. Land it!

Now the picture must not have a straight, or nearly straight line, running directly across it. The result is not artistic. It is like viewing an object as an architect's perspective. The objects to be avoided are: those that appear as we look at right angles across streams, roads, fences, or paths. The thought to grasp is that something should lead the eye from the foreground to the background. Hence, we always look directly, or at least on a marked diagonal, along a stream, a road, fence or path. The diminishing of the object, as it retreats, is interesting. That is why pictures looking across lakes are seldom good. Look along one of the shores, and you have a picture. Hence a river is never as good as a brook. We may see both banks of the brook leading away from the eye, and its irregular contours seldom lack charm. An absolutely straight road should be avoided. It is better to get away to the little cross roads and lanes.

The artistic canon runs to the effect that the main object of interest should never be close to the center of the picture. In portraiture, this canon does not necessarily hold good, though even there it is to be considered. A great tree or other prominent object in the center of a picture may be a tree portrait, but it does not form a composition. The effect is still worse if the horizon is close to the center of the picture. A horizon, broken by much uneven ground or foliage may be redeemed, even if it is centered. But the main object must always be viewed so that it may come quite a distance, right or left, away from the center. If a road runs past a tree the road may come on the central portion. The eye does not so much object to the central position for roads and streams, but a degree of decentering is better. A cottage may sometimes be regarded as a portrait. It may be impossible to decenter a dwelling, without encountering too great difficulty.

The rules given above are not arbitrary. It has been found through long trial that they define human interest. Of what use is a picture unless it holds and pleases the eye? Of course, we always say to friends who present a batch of snapshots for inspection, "How interesting!" But if the pictures break the laws of composition their interest is more as horrible examples. If you have a favorite apple tree, which you wish to commemorate, you may make a portrait of it, centered on the plate. It will have, perhaps, a horticultural, but not an art interest.

If people make pictures to suit themselves, that is their privilege! But if they submit their work as compositions that is another matter. The difficulties of the camerist are vastly increased by the extreme foreshortening effect of any lens. As one drives along with an inexperienced friend, it is often a puzzle to that friend why his suggestions as to themes, are not

followed. Such lovely scenes, all scorned! The technical obstacle is that the theme viewed in the camera is too broad and general. Our friends are always dragging us to mountain tops or famous "views," where we may see four states or ten counties at once. Well, we can see the entire moon at once, but that is no reason for photographing it. Ten square miles on ten square inches is folly. The part is more interesting than the whole, in this regard. Concreteness, nearness, a story about a particular thing, these are the elements of good photographs. Among fifty thousand subjects we have not one panorama that ever pleased anyone. People often express admiration. But do they admire enough to desire to possess? That is the test of real admiration.

For this reason, the chapter on cameras said not a word of the panoramic camera. It is said the eye takes in only about 30° at one time—a twelfth part of the circuit of a horizon. Test your own eyes and you will find it difficult to be conscious, at one time, of a spread as great as this angle. Commercial reasons may sometimes call for panoramas, composition never. But because we can look at a picture with some degree of leisure we may tolerate an angle in an art subject of 67°, though 50° is better. Pictures made on a seven inch plate are best with a lens from eight to nine inch focus. An effort to include a great deal results in securing nothing worth while.

As we look at a possible subject for photography we should form the habit of framing it with our eyes, without the use of a camera. Landscapes are more richly enjoyed in this way. An old camerist, on a tour, thus inevitably finds himself marking out the outlines of thousands of scenes. He must first ask himself whether the subject is vertically or horizontally longer. At work, he must occasionally reverse the back of his camera,

before deciding which form his picture shall take. The great majority of landscapes are long horizontally, so much so that dealers in pictures call them "landscape shapes." Of course, all pictures are panels, but the term panel is generally used for a high and narrow picture.

In no respect is the public so slow as in its lack of recognition of what a wall requires. One often sees a long, horizontal panel picture in a narrow vertical space. The effect is as painful as a discord in music. It is positively better to have no pictures than to hang them regardless of the wall space they are to decorate. The writer is fond of narrow vertical shapes, and in most rooms there are narrow spaces where such pictures fit perfectly. Narrow roads or brooks with overhanging trees are promising studies, for such panels are often very charming, if for no other reason than that they concentrate the attention on some excellent detail, emphasized so that it appears new to the observer. Every print, whatsoever, should be scrutinized for shape before it is allowed to pass as good.

It is a wooden way of doing to pile up a batch of pictures, all finished just according to the outlines of the plate.

A most amusing incident, at least to the writer, occurred in the studio of a painter in oil. The excellent man was in dire straits for funds. A would be customer called for a small vertical panel at a certain price, which though moderate would have been acceptable. But—there was no such picture on hand, among many. The author, seeing the customer about to depart, happened, in a wildly wandering glance, to see on the easel a picture with two centers of interest. It was not good as it was. A grab at a piece of card board covered one end of the picture. The artist agreed to cut his child in two. The deed was quickly done, a fourth side added to the stretcher, the money

paid, and the artist, his face a mixture of gratitude, humor and surprise, sat exhausted, surrounded by precisely the same number of pictures as he had before! And the remaining half of the cut canvas was better than the whole of it had been. It was a case of multiplication by division.

If a stream is followed closely by a road, the two elements of the composition may be thought of as complementary, and hence as a unit. If two roads, or streams, diverge, or any two long lines reach away at angles from the camera in a too evident manner, the result is a divided interest, and poor composition.

Summing up the salient features of composition:

- 1. Be sure the subject is really interesting.
- 2. Keep the main feature well away from the center of the picture.
- 3. Remember that the foreground is much more important than the background.
  - 4. Avoid panoramas. Get large features of interest.
- 5. Let the main lines run away from the camera, obliquely or directly.
  - 6. Avoid long straight lines, especially across the picture.

The importance of composition cannot be exaggerated. If one finds that he cannot, after a good apprenticeship, compose well, he would best abandon the use of the camera.

Some scenes fail to compose with any degree of satisfaction. That is, they are not pictures. The first thing to learn about a picture is that it is a combination of objects. It is true there is a main object of interest. That, however, is not enough. As a jewel needs a setting, the sun a sky, so a brook needs borders, a dale requires hills, and good furniture requires a good room.

Culture features, as they are called by map makers, like

roads, paths, walls or dwellings are, to a certain class of minds, essential to arouse interest. It is seldom that tastes so combine in one person as to allow an interest in many classes of subiects. Yet breadth of interest must be cultivated if it does not exist. It is a bad sign when interests are so narrow that only one class of subjects wins attention. Thus the camerist, on an expedition, will tend toward wider interests, as he observes the ocean surges, the forest paths, the blossomy spring, the brilliant autumn, the flocks, the farm labors. He learns to pick out dwellings so as to name their period within twenty years. He eventually may be a little of an artist, architect, horticulturist, botanist, herdsman, scientist, boatman, mountaineer, sailor. The world gets bigger and better as he broadens. Stevenson's thought that we should all be as happy as kings is even more apt today, when the head that wears a crown lies more uneasy than ever.

In short, the seeing eye, accompanied by a good camera, ought to bring home a fairly good history of the country passed through. The variety of objects pictured will mark the breadth of sympathy in the camerist. In Killarney a gentleman from America was met, who followed up nothing, weeks on end, but the Irish children. The glory of the country in which they lived was lost on him. Had he arranged some of these children boating, fishing, or following a path, in a good setting, the children would have become more interesting. If the baby is the only object of interest, at least plump the baby down in a field of daisies. People and things are interesting only in their relations to other people and things. What makes a picture is a long story. Art is long, but life is longer, and art that is unconnected by sympathy is like a knife, fork and spoon that never meet food. Art for art's sake is an impossi-

bility, because only life can appreciate art. And art becomes art in human thought only. Art is, in its essence, yoked with life.

Thus associations give pictures. It is not aggregations. Thus, a bushel of grains is not a picture; nor are a thousand sheep; nor are endless rows of apple trees. But a few of the sheep, eating a few of the grains under a few of the trees are composition, because they are together life, and may be art in the right hands.

There is no such thing as absolute simplicity. The word is worked to death, and as ordinarily used means less than nothing. We see a caption, A Simple Wedding. Reading on, we find appearing a vast number of elements to make up this "simplicity."

The very word composition compels us to think of component parts. So thought must enter into composition. One photographs an out door subject as he sees it, but one must have noted the elements making up the complex whole, else the picture is blindly made, and worthless. An artist may place his models and may work into his compositions anything that appeals to him. The camerist, out of doors, may only select or reject. His field is far more limited than that of the artist, who, painting the self same subject, may omit something of which he disapproves, or include some effect, seen elsewhere, but not in the scene before him.

The camerist is therefore challenged to compose from the elements available, and in choosing his ground, he proves whether the talent is in him. Composition is sometimes only half aware of itself. We admire what we may not be able to analyze. One with a genius for composition may work so rapidly as to seem to work thoughtlessly. But the nimble mind

may lay out in a moment more than the body can accomplish in a year. The delight in composition is in feeling the niceties of the requirements, and in catching a charm easily overlooked. Most of the pictures are yet to be made. America is an almost untouched field. Even in England it was not until a time so late as Constable's that painters began to record with enthusiasm the beauties of English landscapes.

The camerist, going tomorrow into some remote mountain valley, may be the very first to study its charms, to eatch its various aspects and to call the world's attention to them. Nor is it always necessary to travel far. The creative spirit must exist in the good camerist. He, indeed, cannot create. But he has the spirit, and can, therefore, record and can put two things together that have hitherto not been associated. The camerist is an explorer, a discoverer. A little Columbus, but yet a Columbus, though his ocean be only a mile across, may see new shores, and not be jailed for having open eyes, as was the first Columbus. It is perhaps as difficult and therefore, as great a challenge, to work with limited materials as with a continent.

## COMPOSITION OF INTERIORS

Photographing the baby is, no doubt, the principal use to which the camera is put. We are encouraged by the love bestowed on children. It is the hopeful sign of the generation. Sometimes no little skill is developed in catching the ever delightful attitudes of babies. Given a strong light and a strong baby the results are satisfactory to all concerned, the infant, the parents and "inquiring friends." But as many conditions

are good for this subject, the reader will probably not look for suggestions here.

In general, the making of portraits is more a matter of lighting than placing. But as many are beginning to feel the charm of portraits made at home, it may be said that the best results are obtained by having as little distance as possible behind the subject. As the main focus is on the subject, any distant part of a room, that appears in the picture, is inevitably much out of focus. A lady at a desk, or sewing (if she has learned to do that!) or at a musical instrument, as a harp, violin, or piano, admits of pleasing composition. It is not intended here to dwell at length on studio portraiture. But in portraits it is necessary, besides using a soft light, to see that there is not such a strong upper light as to dull the face and neck below the nose and chin. Also, one must be careful to avoid double lighting, such as comes from two windows. Such lighting throws double shadows and ruins the negative. If the position is as far as possible from two windows, the bad effect is overcome. But such a position will require, perhaps, a half minute exposure. Within three feet of a window and a little back of it, with the face turned half toward the window is a good position for a portrait, when the room is not considered. Of course, no sun must be shining against the window. This is true, even if the sunlight is excluded by a shade. The light will be too garish and show too much contrast.

Such a position, when the light is strong, will afford a good negative, if timed about four seconds with an 8 stop. Of course, the camera does not show the window, but looks across it, just shutting it out.

The camera exaggerates shadows. If one can detect, on

the ground glass, a distant shadow, he will find that shadow doubled in emphasis on the finished negative. Hence, in the composition, every part must be lighted softly. So, in studios, a secondary back lighting is secured by placing a white screen opposite the window, thus securing light on the dark side, for greater evenness. But one can go to an extreme in this matter. A flat lighting gives a dull, even a lifeless, effect. Out of door portraits, in shadow of course, are sometimes too flat.

Any human subject moves somewhat during an exposure. There is no such thing as sitting "perfectly still." Nor is this necessary. The breathing causes a slight motion and unless the subject (otherwise the victim!), is free to wink, a staring effect results. In an outdoor snapshot a wink may show the eye closed, but in an interior subject, which always requires several seconds at least, winking produces no appreciable effect.

When portrait effects are not sought, it is necessary that the subject should be engaged in some sort of occupation. Reading, knitting, sewing, playing a game, or any of a hundred things suggest themselves.

Fireplace scenes are good. A small fire, or at least a degree of smoke adds to the value. Its motion is just what is needed for softness. When strong effects are sought, a flash light may be arranged in the corner of the fireplace not seen in the camera. In this instance the camera should be directed nearly across the fireplace.

Flash light work is not recommended, but is, at times, necessary. The results are somewhat ghastly. Of course, the flash should come from a point a little behind and a little above and a little to one side of the camera. The lens is to be

opened just before and closed just after the flash. The stop must be large, never smaller than 16, and usually 8, or half way between the two.

An arrangement of furniture, no piece being near the camera, is necessary, whether figures appear, or not. Furniture that looks very well to the eye may interfere, one piece with another, in the camera, which of necessity cannot be set very high, or it will cut out all the floor. Effects are better when a very moderate amount of furniture appears. The lower pieces should be those nearer the camera. No good interior can be made with a stop larger than 16, and the focusing must be done with extreme care. The eye will not tolerate fuzzy interiors. If no figures appear, and time is no object, a 32 or a 64 stop is recommended.

One must decide whether the features of a room are such that a wide or a moderate angle is better. It is usual to employ a somewhat wide angle on interiors, even though the edges of the plate show distortion. If the focal length of a good lens is about four fifths of the length of the plate, the distortion will not be extreme.

One should be warned that few rooms are worth picturing. The matter of taste in furnishing is at a low ebb, and has been for more than a hundred years. Good furniture is much more rare than good rooms. Even when fairly good furniture is found, it is ordinarily so jumbled as to period that the picture is bizarre and undesirable. The writer speaks feelingly on this matter, as he has expended a fortune in preparing proper rooms for pictures.

Heavy mahogany requires long exposure. Extreme contrasts will make good interiors impossible. Small rooms should never be attempted. Even in a room sixteen feet square it is



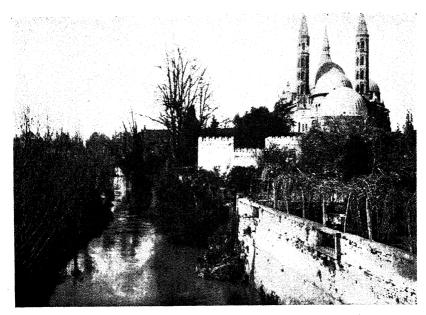
SPRING AT THE MILL

Plate 52



IN THE DIONYSIAC THEATRE AT ATHENS

Plate 53



SEVEN DOMED CHURCH, PADUA

Plate 54



STOKESAY CASTLE GATE AND CHURCH

Plate 55



BRITTANY, AN ORIEL, AT QUIMPER





TWIN DOORWAYS AT COOMBE

 $Plate\ 57$ 



SPANNING THE GLEN

Plate 58



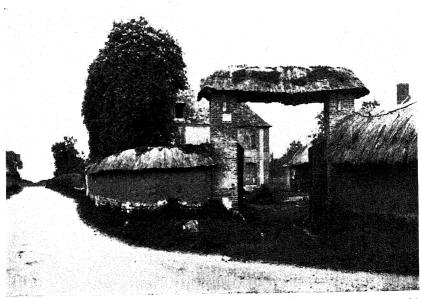
THE EXPECTED LETTER, WALES

Plate 59



BETHANY, HOLY LAND

Plate 60



THE HOMESTEAD GATE IN NORMANDY, FRANCE

Plate 61

well to place the camera outside one of the doors, to gain a longer effect.

In arranging interiors with figures, unless these are to be frankly portraits, they should be placed well back in the room. It is a nice question just how far back, but if the figures are in the remotest corners they are too small. If they are nearer than half the distance shown they are too large. Of course, figures in such a setting should never look at the camera. One finds difficulty, except with educated people, in inducing the subjects to keep their eyes on their work, not on the instrument.

Unless the persons are engaged in some occupation they will inevitably, seem unnatural. The portrait is to be distinguised constantly from a general picture of a room, in which persons appear.

## ANIMAL PICTURES

It is useless to follow about a flock of sheep in the hope of a satisfactory picture. First, find in the pasture a fine setting, with all features considered,—the foreground in this case is not important, because the sheep are to make it, but the other parts of the picture should be as good as the pasture affords. A prairie could never be passable, unless there were fine trees. In general, the more uneven the contours, the better.

Set up the camera, and arrange carefully every part of the composition, without the sheep. Throw a stick here and a stone there, unless there are natural markers. Thus the limits of the foreground should be picked out by the eye and the markers. The converging sides of the picture should be defined, also,

with unobtrusive markers. Then a little grain should be scattered about where the sheep are wanted. Some of it should be in the immediate foreground. Then a confederate should drive the sheep gently toward the camera. They will scatter and stop gracefully, when they reach the grain. The camerist should be ready at the proper instant, his slide drawn beforehand. The swing back will be in use here, so that sheep only fifteen feet away will be in focus as well as those that trail the flock.

Less than a half dozen sheep are too few. More than thirty are not as good as less than thirty. A great flock cannot give artistic results, as individuality is lost.

Sometimes sheep can be caught in a fence corner. A road that forms a fine setting may be very well, though, with nothing to eat, the sheep will be impatient and not likely to stop. In this case they may be done, head on, by a fast exposure, while they are walking slowly. If the driver looks like a shepherd he may be included. Otherwise, induce him, in spite of his aggrieved protests, to dodge behind a tree. Sheep at outdoor mangers are sometimes good.

Cows may be done in the same manner. If one gets in the lane, or the open pasture path which they follow on the way to the barn, it will be found that they will come on until their curiosity is excited by the camera. That is the proper moment. Do not feed them. It is better to have them observing you.

Sheep are the only large animals, pictures of which have any general interest. The picture admirer is usually a woman, and she cares nothing for cattle pictures. The writer has also learned to his sorrow that no one ever takes any interest in pictures of horses.

Little chickens with their mother are excellent, in theory. The background, an old back door, or fence. But very rapid

work is necessary, and the subject must be close at hand. The fuzzy little creatures will appear still fuzzier, from motion. It is one of the hopes, in our family, to obtain a good chicken picture. Of course, it can be done, once sufficient planning is given to it.

Greedy calves are an excellent picture,—to this writer's mind, but the public rule otherwise. Pigs, yes, nursing pigs, we have done, and the print has been left in our possession. Yet what is prettier than the round satin roll of a little pig?

The photography of wild life is a theme by itself. Birds are done by setting the camera, focused, on their nests, and exposing from a long distance. Larger wild animals, like deer, are sometimes done by flash light. Pictures of animals in a "zoo" are scarcely worth while.

The commercial photography of domestic animals is followed by some photographers. The horse or bull is held by a leader; the picture is made at the side of the animal, and care should be taken that all four feet show, and that the head is up in a spirited fashion.

# OUTDOOR PICTURES OF PERSONS

THE plantigrade animal called the flapper is perhaps the most popular subject. She, also, should have head up, both feet showing, as, in present fashions, is always easy. This serious subject—with most young men—we must treat more seriously. Outdoor pictures of persons should be arranged so that whatever appears as a background should not be so far away as to lose focus entirely. Foliage assists, or some object fairly dark, in bringing out the shape of the countenance, the picture being made when the sun does not shine.

An arrangement of a large group may sweep about in a curve. If there is more than one rank, those in front should sit. In a general picture no harm is done if all face the camera. As this subject is not, as a rule, a long time exposure, the results are not as rigid in appearance as studio work. An evergreen background is admirable.

Persons engaged in some sport or labor out of doors, should, of course, never look at the camera. Plowing, haying and many other farm scenes may be picturesque, though no one is likely to mistake them for Constable's work.

Golf and other games are much photographed, often under adverse conditions. Action in photography is seldom graceful. The painting of men on horseback used to show the mount gracefully curvetting, but photography has caught the horse in action, and proved that the eye, being slower than the lens, has never discovered the angular, generally unpleasing position of a horse's legs, in movement. The same is to be said of a rapid marine. The waves are spattery. A golf picture may be valuable as showing good technique; but it is better to show the golfer in the quiet moment before the swing, if a pleasing portrait is desired. Running persons are not graceful in photographs. Swimmers, in the act of diving, may be good, and in swimming they may be fair, since the action is not as rapid as in running. The humor of the moment, or the prowess of the player may be the purpose of the picture, in which case these suggestions may be ignored.

It is an amusing game to try for photographs when the subject is off guard. The results may show an animation and a naturalness impossible in a posed picture. We often hear it said that the picture is better than the subject. That is never true. Unconscious poses are, on occasion, wonderfully fine.

It has long been a dream with the author to arrange a large studio with an invisible camera and an operator who shall be able to catch the happy moment while the subject is engaged in conversation, or, better, listening to an animated conversation. Something is required to be rid of selfconsciousness in the sitter.

#### THE ILLUSTRATION OF STORIES

MAGAZINE and book work of this sort offers room for ingenuity and talent. One who keenly appreciates the points of a story may compose pictures to add interest to the text. This work is often done by sketchers. The objection to the use of the photograph itself is that book paper will not render it well. Nevertheless, a sketch may be made from the photograph, or the photograph may be used as a frontispiece. It may, also, often be used for a jacket of the book, or of the box which contains it.

Indeed, it is possible that a series of pictures may suggest a plot, so that the pictures may write a story. It has been only within a few years that non-professional models have been available for such work. Nowadays there is not the same scruple that used to exist against the publicity of such pictures. Indeed, the papers show us, every day, a successive array of portraits of persons of all sorts and conditions.

There are processes by which photographs may be sharpened without abandoning them for free hand work, suggested by them. There are also processes just coming into use by which photographs may be done on book paper to much greater advantage than formerly.

One sees a large use of portraits for advertising wearing apparel.

# THE BORDERLAND OF MYSTERY

Whoever works with a camera is enlisting certain subtle, wizard-like powers, little understood as yet, and having still the fascination of the unknown. Perhaps the writer has elsewhere called attention to one of the greatest miracles,—the light's action on a plate. In a small fraction of a second a record is made, wholly invisible in the dark room. Look (but do not look often), at an exposed plate, before putting it in the developer. It is precisely the same in appearance as before exposure. The microscope can detect no difference. Yet, a hand has etched there with a million strokes, delicate with a witchery beyond human capacity, an image containing gradations so fine that we have no similes by which they may be described. Here is a latent image. In certain conditions such an image might, when developed, make or break a man, or a society. Here is something for the man to look at who "believes only what he can see." At work, we often said to farmers, "We are taking something away from your place; you can't weigh it, you can't see it. It makes you no poorer, but it is valuable to us." We are here very close to the borderland of the fourth dimension.

In a recent novel the court photographer developed a negative of the royal couple. In the background, against a wood, appeared a person, unknown, and not supposed to be there. A feverish stir occurred, and detectives were put on the track,

only to find that an American, wandering unwittingly in the park, had by chance stepped out of a wood, and finding himself intruding, had withdrawn and walked away. What records might be, perhaps are made, of acts supposedly unknown!

The quickened pulse, as the image begins to appear on a plate, is one of the delights which only the camerist knows. He is not always a fiend. The author was, many years ago, getting a photograph, at Arlington Cemetery, of his father's grave, to take to his mother, far away, who had never seen it. A gentleman, in a nearby party, was heard to say, "A camera fiend, even here!" When the facts were explained to him his embarrassment was most painful to witness. Never was any one more mortified and apologetic. Yet he had meant well, very well. The camerist is not always as silly as he may appear, being found in strange places.

Photography has much to recommend it—so much that we cannot wonder at its popularity. To catch and carry away a beautiful mood of our beautiful world and to possess it, as a permanent record, is so much better than an aimless walk or drive. You may go fishing and come back with nothing. If you make a catch it is not a joy forever. You may drive, and come home poorer. But to be a beauty hunter is certainly among the most alluring and highly rewarded of all avocations. The little wood flowers, the forest paths, the opening pussy willows, the laurel and the moss in the crevice of the rock, what challenges these hold out to the imagination, and perchance, to the intellect! You cannot easily render a true camerist miserable. To him the world is ever more rich, year by year. Every sunset, every crest, is more beautiful, and more significant than those which preceded. The garment of Infinity is always unfolding and disclosing new wonder, new hope.

There is no pause to progress of this kind. Life enriches itself hourly, so that the "full man," in Bacon's pregnant meaning, is never bored. He is a spectator, and more, he is, as the French say, "assisting." The world is his. He is envious of nobody. Nothing bitter gnaws at his heart. He is always present at some new creation. His moving picture costs not millions, but only an appreciative eye.

It will be generations, if ever, before the common mysteries of the world are cleared up. And when they are cleared, it is a delight to understand that still another class of mysteries lies behind these. We are working on the outskirts of science, beauty, power. If it is gold on the border, what must it be at the core of things? No man now knows a thousandth part of available knowledge. Of that knowledge, at present unavailable, we know not one part in untold myriads. If every person in the world had, as his exclusive knowledge, all he could remember, and no man knew what any other knew, yet all this mass of knowledge, rolled together, would be a wee fraction of all cosmic knowledge. The man who thinks he "knows it all" is not only not awake, he is not even reasonably intelligent, but in the moron class. All wise men are interested in the world. and it is therefore easy to interest them because of the magnitude of the ever present and inviting subject.

Perhaps there are persons who have not considered that they pay no compliment to the Almighty, when they are not interested in what He is doing. This lack of interest is their condemnation. Bring a man before the Sistine Madonna. He is not impressed. That fact is not against the painting, but against the man. "Where did you find that beautiful picture?" asked a friend. "Within ten rods of your own door" was the literally correct reply. And he had passed that picture about

four times a day for fifty years. The instance is not solitary. The unseeing eye is the commonest contradiction known. How much can we see in an incident, in a man, in a landscape? The answer measures us. In fact the keenest of men have not yet seen the best of anything. That has still to come to light. There is an undeveloped plate in every man's brain. He, perhaps, does not know the picture is there. He has recorded it unconsciously. But, sometime, some influence will develop the picture.

The brain may be likened to a file wherein are kept pictures of life. The man with a good memory can go to the proper point in the file, and take out the picture. Accident, shock, affection, association, may cause us to bring to light again a vision forgotten. For forgetting only means that one is unable to lay hold on an old experience. Something occurs and the past "all lovely on his sight returns."

The actual making of pictures with a camera is a device for impressing an experience so that we may recall it the more readily. The man who rejoices in the truth and loves to image it is allying himself with fine company.

## SELECTION

PICTURE making is a process of elimination. We are seeking to get the interesting core from a drab general landscape. There is something good in every square mile, if we only believe it. To be saved from failure, one must have faith that the subject is before him.

Here is a theme of ordinary interest. If the grass is high

and the day still, emphasis may be placed on the grasses, which are very beautiful, when done large, with ample detail. A whole house may be poor. It may have a delightful old front door, or back porch, or small gable. The barn, as a unit, is, perhaps, impossible, but the sheep shed at feeding time is another matter.

Selection is an aspect of composition. But it means something more, and different. It depends on inspiration, or genius. If these terms are too high sounding, then let us say selection is taste, or the sense of the beautiful.

Whatever is done with a camera, let it not be aimed at a freak. Anything in nature like a two-headed calf is not to be emphasized, but overlooked. There is enough of the monstrous in the world, enough of the uncouth and the ungainly, without recording it in a picture. If your taste directs you to photograph the spot where some crime was committed, so much the worse for your taste.

We have recently been informed by the press that a lane where a murder was done was crowded for long with motors whose passengers had come to that point, some of them from great distances, for the express purpose of photographing the humdrum, bushy lane!

A local photographer was said to have done a great business disposing of pictures showing the very spot in the bushes where the revolting crime was done! It has been a long time since the multitude took a holiday to see a hanging. Had cameras been in use in those days of course the ghouls would have been snapping away for dear life. Of what possible interest, on earth, or in heaven, is a picture of human misery, wickedness, brutality? Most of us carry too many such visions in our heads already. A person's character is exhibited by the class

of pictures he gets. If he seeks for grandeur, sublimity, grace, home charm, the sweet, the fine, the glorious, he is merely seeking what he loves. If he seeks merely crooked things—we go no further in the comparison.

What the world wants may be something quite other than it needs. We hear occasionally of persons being arrested for selling obscene pictures. There are all kinds of taste, and lacks of taste. One can help build up or pull down, with pictures, as with writings. If looking at a picture produces fine reactions, the picture is a good one.

Sometimes a slight swing of the camera will shut out or take in an object to be shunned, or to be sought.

With this matter of selection the kindred theme of emphasis is closely connected. Here we meet a technical feature in the lens itself, which is usually an objection but may be made an advantage.

By foreshortening, an object appears far too small, if at a distance. On the contrary, some near object, good in itself, may be magnified, and made much of. A pretty young tree of small account, in the foreground may be brought very close, and on one side of the composition.

At least half of the pictures come under this head, for consideration. Decide, therefore, on the elements that will add to the strength or the beauty of the composition, and bring them out more fully by locating the tripod. An old hand at it can be discerned at once by the time he takes to find the spot. For there is a best spot, almost always. A foot one way or another may make or mar the picture. This matter of emphasis is very big. It enters into all departments of life as well as the pictorial. To have, or to cultivate, the habit of selection or emphasis, makes all the difference between delight and its

opposite. Get near what you like, and like what is really worth liking, is the whole law.

Scarcely any valley, across which we look, lacks a fine spot, a noble tree, a cozy cottage, a little path, a rippling turn of the brook, the curve of an old wall. There is something before us; let us find it. It is better sport than gunning, because with the camera we may always get something of a fair degree of merit.

We will remember lighting on the old village of Lacock, in England. It is said no house has been built there for three hundred years. Yet here is no ruinous house, and none, among a hundred or two,—the entire village,—which lacks picturesque features. It was like being set down in Paradise. An architect would go raving mad, and we are warning that profession to steer clear of the place.

Some of them have already been bewitched for life by one glimpse. Castle Combe, a few miles north, is a good rival.

The multiplicity of good doors, windows, odd half timbering, street vistas, is endless, and endlessly enthralling. The mellowness of age, the comfort of substantiality, the good thought embodied in details, the quaintness of the gables, the coloring of the waving roofs, with iridescent tiles,—all are enough to hold the gaze until one thinks of himself as in the attitude of a pointer dog.

In selection, large plain surfaces are naturally avoided. Angles, curves, groins, coigns, and jointures are what one is to seek for. And he that seeketh, findeth.

The largeness of our sanity is shown by our capacity to become a little daft. Reactions to the good things in this world spell sanity. Dull people lack enthusiasms. We may picture a brain as full, in some of its storage chambers, of

pictures that it never saw. It dreamed them. If this suits you to call them subconscious, do so. Names are not so important as facts.

A varied experience, a looking around, calls up these shadowy images, and we say: "There! that is what I have been looking for. It meets my dream. It satisfies my groping, and embodies the outlines I have hoped for." Thus pictures are found.

To make good picture selections calls for all that is in us. The more that is in us, the more there will be in the pictures. Perhaps the mind, anyway, is only a reflex of all that has been, or may be. En rapport, the pregnant French phrase, may express best that affiliation of the man with his subject which in itself is a delight and gives delight to others. If one knows how to select, he need know nothing else, because he grows into the embodiment of his selections. But avaunt, Philosophy!

Get your old album of life together and it will picture yourself. Somebody was a quarter right, when he said he could tell what a man was if he knew what the man ate. You can tell, absolutely, what a man is by what he looks at!

# THE MERIT OF DEFECTS

A good lens sees more defects than the eye can see. Worse, a good lens magnifies defects.

The human face, on an untouched portrait, looks as rough as the surface of the moon (otherwise, also, somewhat resembling it!). Any little unevenness on a surface becomes a hill and a valley in the lens' eye. Hence, the necessity, in portraiture, of retouching, or of making the portrait with a soft focus.

A merit of this surgeon-like probing of the lens is that it will often reveal defects that were thought to be hidden. A restored piece of antique furniture, will in picture, if the negative is a good one, show an added new section or an inset repair. Photographs will often reveal an erasure in writing, and are of much legal importance in bringing out changes in documents.

The first time anyone inspects a line engraving he is astonished by the depth of the lines. The plate resembles a mountainous landscape. An ordinary, but rich negative, viewed at the proper angle of light, is marvelously beautiful, in its bold but dainty etching.

The criminal has used photography in counterfeiting, and the scholar has used it to bring out an under, and older text, on the parchment of manuscript. The astronomer constantly uses it on the stars. There is almost no art or profession in which the magnification of merit or defect is not helped.

The use of the X-ray has opened a benignant field for photography. The writer broke a small bone and did not know it until the fact was revealed by the X-ray. There are kinds of light, dark to the eye, which the lens can record patently. The uses of photography are scarcely hinted at, as yet.

It has been stated, recently, that there are more pictures made of stomachs than of faces. This is a literal fact, since medicine has made use of the X-ray. It may be known by this process whether the roots of teeth are absorbing, whether the bones are malformed, and, by the use of certain color injections, the various organs of the body may be made to show distinctly from one another. Formerly the camera merely saw surfaces, now it actually sees through things. We may confidently believe that more extensive developments of this

sort lie ahead, and not far ahead. So that the camera not only discloses beauty, but brings into range a kind of light invisible to our eyes, and thus becomes important as a step toward the alleviation of pain.

### MOONLIGHT EFFECTS

REAL moonlight pictures may be made by an exposure of an hour or so. But the moon should not appear in the picture as its motion would image a monstrosity. The usual "moonlight" is a picture made at any time of the day, looking toward the sun. A common plate will answer for this work, but the "iso" with a screen is much better. The endless varieties of theme are of no little interest. The picturing of the dreamy ruins of the old world in this nanner is rather effective. Looking against a woodland affords a poetic theme. The best effects are thought to be those obtained by fine clouds, as one looks across water. We do not picture the sun itself—an entirely feasible matter if it were worth while, though a double image, from reflection in the apparatus is common. We watch the sun in a broken sky. When it is obscured, so that its outline is no longer visible, we make our picture. The light streamers are sometimes striking. A lane of light across the water finishes the composition. The time is about half that employed with ordinary pictures. A lifeless effect often results when no intention of "making moonlight" exists. If the sun is very slightly in front of a straight line across the camera, or if, though the clouds seem thick, we permit that part of the sky to be included where the sun is, the picture may puzzle the beginner through its lack of animation. An effect almost as bad occurs when the

sun is in midheaven, as has been explained elsewhere. The entrances to harbors, from a ship deck, are excellent themes for "moonlights." When one has traveled far, and finds a good view before him, and he is to "pass this way but once" he may thus secure a memento of his voyage, despite the sun.

The weirdness of a forest at night, the serried ranks of many fishing boat masts, the gloom of a haunted house, the loneliness of a forsaken shore, all suggest themselves. If a youth is a bit "moonstruck," he will find sympathetic assistance in the camera. He may go roaming about to his heart's content, and derive not a little pleasure from his misery.

## THE ILLUSTRATION OF ESTATES

THERE are now, such is our national wealth, numerous beautiful estates where the artistic eye may discover compositions of so much distinction and grace as to surprise and delight the owner. It is easy to puzzle an owner, by asking him to name the location in which certain pictures procurable on extensive grounds were made. There are possible certain selections, and emphasis, which perhaps the landscape artist who laid out the grounds had not observed. It is a great pleasure thus to test one's capacity to secure a beautiful composition. It is likely that a wide extension of this sort of work will take place. The possibilities are not endless, but very broad. Work of this kind, which the author has done, has been among the most pleasing of his occupations. Only one thing needs to be guarded against. The owner, being human, naturally presumes that he knows the best points for pictures. He is often mistaken, partly because he does not take account of the fore-



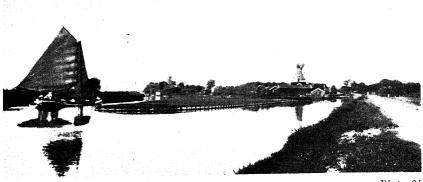
WELLS, ENGLAND

Plate 62



A COTTAGE IN SOMERSET

Plate 63



HOLLAND EXPRESS

Plate 64



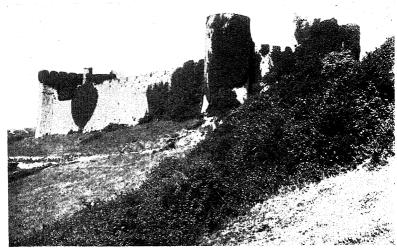
HOLLAND, DYKESIDE BLOSSOMS

Plate 65



SYRIA, BAALBEC

Plate 6



A WELSH CASTLE

Plate 67



FLOWERS IN THE WINDOW, CHURCHINGFORD, SOMERSET, ENGLAND

Plate 68



TURKEY, TOWERS OF RUMELI HASSAR

Plate 69



APPROACHING CONSTANTINOPLE, TURKEY

Plate 70



OLD VENICE

Plate 71



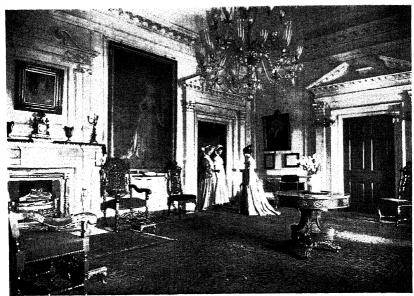
FIRESIDE JOYS

Plate 72



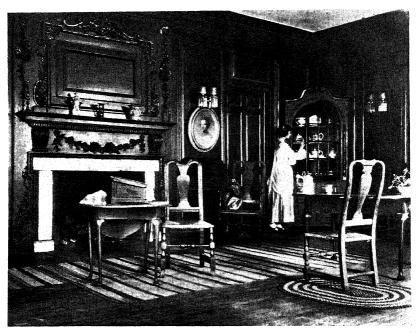
COMMERCIAL, DINING ROOM OF 1720

Plate 73



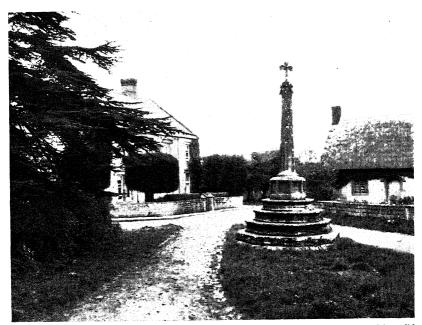
A CHARLESTON DRAWING ROOM

Plate 74

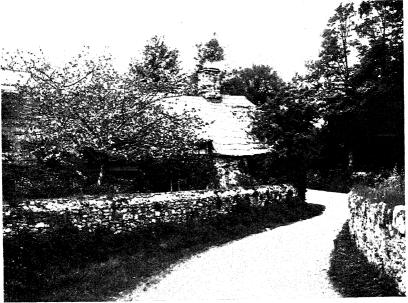


MASSACHUSETTS, THE LEE MANSION

Plate 75



MUCHELNEY CROSS Plate 76



DINGLE-DELL COTTAGE, LOWDON

Plate 77

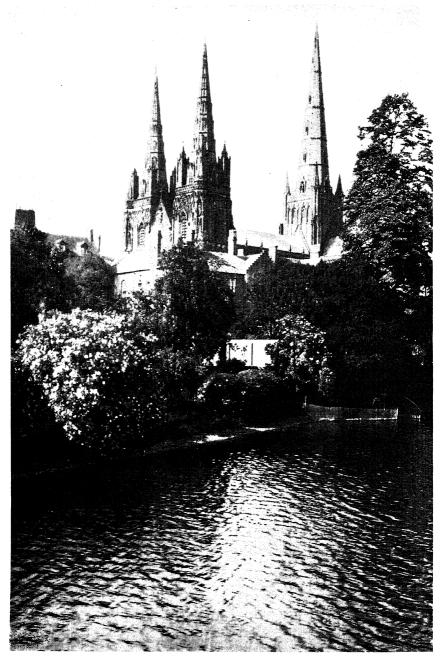


Plate 78

shortening effect of the camera. In such cases it is well to go forward, doing everything suggested, and then to ask the privilege of doing a few more subjects independently. The result tells the tale. The owner has what he asked for, and he also has something better, so all are content.

The following make a balanced assortment for the illustration of an estate:

Two aspects of the mansion house; a detail of a fine door; two or more interiors; two or more of the drive, according to its length, and beauty; two or more of a stream, passing through the estate; vistas through the garden path; any attractive summer houses or farm houses, with approaches; the borders of pools; vistas through a pergola; wood paths; orchards; along vine covered walls; the sheep or cattle at pasture, or coming up the lane; animal pets; the principal outlook from the estate.

A good size is eight by ten, but larger or smaller may be chosen. Prints should be mounted and kept, loose, in a folio. They may also be done by reproduction in a small book, with descriptions.

### COMMERCIAL PICTURES

A wine scope for work may be found here. Manufacturers wish their products photographed. It often happens that no skillful man to do the work is at hand. The first requisite is a smooth white background. A sheet is the very last thing to use. A heavy canvas, coated again and again, as it becomes soiled, with a mixture of whiting and glue,—what is called whitewash,—should be used as a continuous background, by

which is meant that the canvas, of adequate size, runs down the wall, and on a curve, out across a low platform-not more than a step high. Thus a picture will be obtained like a sketch on white paper. Anything at all showing behind an article pictured for itself, spoils the effect. The exception is a room in which decorations for floor, walls, windows, or the furniture are to be pictured as a whole. The result is not used as a photograph, but is redrawn as a line engraving, so as to make possible its printing on ordinary newspaper. If the advertisement is to appear in a fine periodical, made on calendared paper, the photograph is used directly to make a half tone. The requisite here is, of course, sharp detail and the avoidance of crowding, with no high lights strong enough to give uneven results. The including of a fireplace adds to the merit, and it also forms a center about which the articles in the room may be grouped.

The finish of machinery or furniture is often too glossy for satisfactory results. The obnoxious features of a machine may be painted with a dull flat lead color paint, of a sort easy to remove.

The avoidance of gloss on furniture is far more difficult. Individual pieces must sometimes have their ends masked by a large dull ground. The very merit of a white background is also a defect, so far as the reflections from it are concerned. Yet, if we use a gray ground the outlines are not sharp enough. Of course, a very soft light is required. It is not advisable to do such work out of doors. There the light is often too even.

One must avoid the reflections caused by having a window directly back of the camera. The light should come from such a point that it is deflected away from the instrument. One needs

only remember that reflections leave a surface at the precise angle at which the light strikes, only in the opposite direction. Look carefully on the ground glass, and if any sheen or confusion appears, a movement of the piece, of the camera, or an adjustment of the light, will cure poor effects. A careful attention to all these details will make the pictures very acceptable.

A matter of prime importance in the photography of individual pieces is the use of a long focus lens. A chair, large on a plate of the size of the focal length of the lens will be much distorted. The back gets much too small for the front. The longer the focus the better on such work.

It will be found that when the front of an object, made large, is in focus, the back is much out of focus. It is necessary to accommodate the focus by drawing out the bellows until the back of the object is better, and the front is only slightly softened. Then, when the lens is stopped down to 32, all parts of the piece will be sufficiently sharpened. The back will never be quite equal to the front, which of course must, in the finished work, be quite sharp.

In all architectural or individual piece work, the camera must be plumb. In marine work, showing a water line, plumbing is also necessary sidewise. Pictures have lately appeared in many of the most important magazines in which the edifices showed walls leaning in, or tipsy. How an intelligent editor can allow such damning blemishes to pass is beyond comprehension.

The plumbing is supposed to be assisted by a level, commonly coming with the camera, and attached to the bed. No one ever uses this level, if he has an eye. The lines of an architectural subject can be trued more quickly, and accurately, on the

ground glass. Swing it first one way and then another bringing the outlines of the building into coincidence with the edge of the plate. A camera tipped upward will draw in the lines at the top and give a pyramidal effect, or at least the appearance of an Egyptian temple. A camera tipped down will spread the top of the building.

One should never, under any circumstances, whatever, tip up the camera to get the top of a building. If the instrument with a front board lifted to extreme height will not take in the subject, and if it is not possible to withdraw the camera to a greater distance, the subject should not be attempted.

### MOVING PICTURES

Why should we wish our pictures to move—especially to jerk, as is usually the case? The moving picture is good for the roving, restless eye. For the contemplative eye it is anathema,—generally speaking. It is not good for sore eyes.

Sometime let us bring out a series of pictures, illustrating an interesting story. Let us make each picture a work of art in itself. Let us show these pictures successively, a half minute, or not less than half that time, for each, varying the time to suit the importance of the theme. The result should be good. Such a work might be monumental in merit.

Every man of even moderately good taste, of course, recognizes the fact that many moving pictures illustrate what is not worth picturing, and do it in a manner not worth doing. That moving pictures are popular proves nothing in their favor, unless the popular audience has been trained more than

present standards indicate. In any department of achievement the good of one generation often proves to be the bad of the next generation. The worst motor car of today is better than the best motor car of twenty years ago. The development of a specialized intelligence is at present needed in moving pictures more than anywhere else, because their influence is so wide.

The Frohman, who went down on the Titanic, once approached the author with a proposal to use the Wentworth-Gardner house (which he then owned) at Portsmouth, New Hampshire, as the scene of a moving picture play to be written for the occasion. The project was never carried out, but properly done a series of still pictures might well set forth in a manner utterly charming, the early life of America, in its homes, its occupations, it loves, perils and achievements.

Here is an untilled field of great promise which, with knowledge and taste and restraint, is capable of producing a harvest rich enough to fill American thought for a great while.

Moving picture cameras are now available for the amateur, who may try to make something like what he has seen, instead of something a good deal better. What is the motive that leads people to produce the inferior? Is it for any lack of the inferior in pictures? So long as the inferior is approved by the careless, or uninstructed, it will be produced. We shall get good moving pictures when we demand them. Whether we ever demand them will be answered by progress, or retrogression, in education.

At present, the multitude, including the rich, are so much absorbed in moving pictures that they seldom look at a work of art. If you want solitude all you need to do is to go to our largest city, enter the greatest museum, find the room where the greatest pictures are and your desire for solitude will be

satisfied. It can never be forgotten that neither the office force, "intelligence" desk, telephone force or porters, in one of the greatest New York hotels, knew where the Metropolitan Museum was. Some of these persons had heard of it.

If a moving picture is designed for those who enjoy looking at murder, or the breaking of the moral law in other respects, doubtless they achieve their purpose quite perfectly. But if beauty is thought of as the basis of production—not beauty for sale,—or if the story is something worth telling, that is another matter. If we eliminate from moving pictures the things with which the world is already overstocked, there will be a conflagration so high that the people in Mars will think the Earth is coming to an end. The writer is not particularly thin skinned. Only, any picture that tells a lie ought to burn. The test is, does the picture leave an impression that evil is good? Is shooting, arson and social sin so rare that we must see pictures of it? Any rotten production rots the character of those who produce it.

It is said by a brilliant writer that "love rejoices not in iniquity." This is a time when Calvinistic deacons who seemed to enjoy discovering sin are pilloried by novelists. If the picture is true the novelist rejoices in iniquity as much as does the low toned moving picture addict. It is too late in history to excuse a thing because it will "draw." The intellectual bootlegger is worse than a law breaker. He is an ideal breaker.

## FLOWER COMPOSITIONS

For dining, and sometimes for other rooms, floral subjects are not only beautiful, but fashionable. Arranged in quaint

bowls or antique vases, and made with color sensitive plates, and screens, they are capable of producing strikingly attractive compositions, especially when colored. Large flowers, not dark in color, produce the finest effects. It is better to make them in moderate sizes, and enlarge to any required size. A wall piece fourteen by seventeen, or, better, sixteen by twenty, is large enough to make an impression. Anything smaller, as eleven by fourteen, in a small room, is only moderately satisfactory.

Flowers, for this purpose, should always be done indoors, as a time exposure, with a 64 or 128 stop, which is necessary for the best detail, and absolute quiet is required. They may be placed when photographing, in reference to a window, according to the suggestions for a portrait at home.

The background should be white, and if one has not a large formal ground a large card board may do. The table may be allowed to show that portion of the top on which the vase is set. Or one may put the container, a fine old pottery piece, for instance, on a high stool.

The writer has used large flower pieces at the ends of three part mirrors, and at the top of two part mirrors.

In the arrangement of the flowers there is room for good taste. They should not be too crowded, and preferably of one variety only, or, if this rule is broken over, the second sort should be introduced as foliage plants, behind the blossoms. Zinnias, hollyhocks, light colored roses and many other large blossoms suggest themselves. They may be planned, according to their intended use, as high and narrow, broad and low, or the intermediate shapes.

There is a dwelling in New England, the walls of which are decorated with a continuous frieze of floral themes. The ceil-

ing is low. The frieze is eleven inches wide, in addition to the molding that forms the bottom member of it. Italian gardens are good for such compositions. Or, instead of floral subjects, a succession of ecclesiastical or castle ruins may be used to good advantage. Or a series of cottages can be made appealing. The combinations suggested are only a few of those that may be selected with satisfaction.

One may, instead of collecting on the conventional lines, specialize on photographing a large class of flowers. The local florist will be found ready to assist such a purpose. Many rare and fine results may be obtained, and may prove a boon.

A small chamber could be wholly decorated with floral themes, instead of using wall paper. The error to guard against is a jumble of subjects. All should be of one class. It is almost as bad to mix pictures incongruously as to mix furniture.

Effectiveness depends on emphasis, and emphasis is attention to one thing at a time. The camerist should set out with the purpose of excelling in some branch of his chosen avocation.

## PHOTOGRAPHY IN COLORS

We refer not to the coloring of prints, but to the process which brings out the natural color on the negative. This process lies under the serious objection that the colors soon fade in daylight. The finest examples of such work are in the Ocean-ographic Museum at Monaco. They are kept in the dark, ordinarily, and viewed through electric lights turned on behind them, for the time being. Their beauty and fidelity leaves little

to be desired. But if one makes transparencies and colors them carefully by hand, the results are far more permanent. Color photography, of a practical sort, has not arrived.

It should be understood that this sort of color work requires an exposure for every finished unit. That is, the negative itself is manipulated to secure the color effects, and is useless for reproduction in color.

## DARK ROOMS

THE amateur uses a bath room, and no one of the household is very well satisfied. Still, needs must when the impulse comes.

It is not much trouble, when a house is built, to provide a little room with a sink.

The best method in a good dark room is to dispense with the door entirely, and to enter by a labyrinth, with two turns, the inside all painted black. The advantages are continuous ventilation, and free ingress and egress, for any one, whether work is going on or not.

If one cares to do enlarging or reducing, the dark room itself becomes a camera, about the inside of which one moves. A track can be made to carry a vertical easel on which the plate is fastened. The camera front travels on the same track, and daylight from a partly masked window, or better a 400 watt light with a parallax reflector may be used. Kits to hold the plates of various sizes are in front of the reflector. The position of the kits remains permanent. A draw of just double the focus, from the middle of the lens to the plate and the easel gives the original sizes, and for enlargements the easel is moved

away from, while the lens goes back toward, the plate.

The sink should be as large as can be afforded and is preferably lined with heavy lead. A lamp in a box, the lamp itself yellow or red and the box with a red glass gives double protection. There must be a dry table. Good procedure never allows any liquid on that table.

Trays of convenient sizes, and a fixing box, with a graduate or two may complete a modest outfit. The loading and unloading are to be done at the table, and the light should be over the sink. Another ordinary light may be provided, if desired.

There are now methods of development so well standardized, following formulas accompanying the plates, that details are not required here.

The ancient pyro developer is our favorite. It does not keep, after mixing. Many prefer the metol and hydroquinone, especially for lantern slides.

In developing, much trouble is caused by failure to flood the entire plate at one sweep. This failure will show a line that cannot be overcome. The factorial system of development provides that it shall be a multiple, eight for portraits, ten for platinums, or strong negatives, of the time required for the "first show" on the plate. A cheap clock with a minute hand, or a watch for the purpose is provided. Use plenty of developer to cover well, and do not work one plate, even a film, on top of another. Experienced dark room men pay no attention to the timing, but judge the negative by examination through transmitted light. Clear glass trays with the colored light below a glass plate table overcome the necessity of lifting the plate until it is fully developed. The light, of course, should be flashed on and off, especially if the plate is an "iso."

Films are sometimes developed in the old way, by holding an

end in either hand and passing the film back and forth through the developer.

Light tight containers are obtainable both for developing and fixing, without handling films during the process. This is convenient and expeditious, but the pleasure of watching development is lost.

The cut film or the glass plate permits particular, special attention. Plates that are known to be under exposed may be placed in a very much diluted developer for hours, and finished by brief treatment in a normal developer. Plates known to be over exposed may be retarded and improved by adding bromide to the developer beforehand. Ordinarily the worker does not know whether the plate has been normally exposed, or not. But if he finds the plates come slowly he may change them quickly after rinsing off the developer, to a thin developer, or may carry them in the old developer longer. About twenty seconds is the time for the first faint appearance of the stronger parts of the negative. But if the worker, as we do, uses a somewhat diluted developer regularly, perhaps the image may require thirty seconds to show. One would not say the negative would necessarily be too thin if thirty-five seconds were the time to show. Multiply thirty by ten, and we have a five minute development. A rinse in water and an even immersion in the fixing bath follows. Do not hasten in taking out the negative. Many a good one is spoiled by incomplete fixing. The negative, finished, should be perfectly clear of milkiness. A long wash, at least a half hour, and hanging or setting to dry, is all now required. Many prefer to cover the tray, when examination is not being made, rather than to cut off the light. Gentle rocking of the tray helps. Final rinsing takes off the specks carried in all except the purest water.

The temperature of the developer should not be below 65° F., nor more than 70°. If more than 75° is unavoidable one should use ice. Warm water thickens and dulls the image, or ruins it altogether.

Developers are kept partially prepared for final mixing, or powders (fresh) may be bought, designed each for a certain quantity of water. There are endless variations, schemes, methods and knacks. Particularly, when it is found a negative is too thin, it may, unless it was carried in developing to the limit, be afterwards intensified in standard solutions. Or it may be reduced. Or, if one has a sleight of hand gift, it may be locally reduced or intensified.

Order, in a dark room, and chemical cleanliness are easier to attain than their opposites. Solutions should be kept in certain places, and no two solutions in bottles of the same shape. Thus work in the dark is facilitated.

Difficulties encountered are:

- 1. A room which leaks light. Consequence, fogged negatives. Landscape work bears less daylight than portrait work.
- 2. Spots on negatives arising from drops of the fixing bath on the negative before full development, or some other form of chemical uncleanness.
- 3. Frilling of the film, from a too warm developer. Remedy, ice. Frilling from a too warm fixing bath is to be avoided by using a hardening bath, according to formulas sold with chemicals.
  - 4. Holes in the negative. Dust in plate holder or on plate.
- 5. Uneven development. Failure to use sufficient developer, or failure to rock.
- 6. Negative too thick. Developer too warm, or over-exposure.

- 7. Flat negative, thick, over exposure.
- 8. Flat negative, thin, under exposure.
- 9. Lack of good development, otherwise than above. Old developer, which has lost its force; mixing up the trays.

A tray should be kept for one sort, only, of solution.

Very serious errors in exposure cannot be corrected, by any sort of dark room manipulation. Only in case of a known under exposure, arising from a subject which could not have been, from its nature, properly timed, can the very weak, slow, covered development avail much. A bad negative belongs in the scrap box.

It is well to know that a plate loses its sensitiveness to developer, after long developing. Probably the first minute, in ordinary developer is more important than the second ten minutes, in danger of light exposure. A long developed plate has sometimes been saved even after a minute's subjection, by error, to "white" electric light. And, after the first moment in the fixing bath, some minutes' exposure to daylight will not spoil a plate.

In making delicately correct prints of negatives, on glass, or films, otherwise called positives, the method of exposure by the camera (enlarging and reducing) is recommended. But ordinary and excellent positives may be made by direct contact in a printing frame and by exposure a few feet distant from an ordinary electric light. Fine negatives, valuable to the owner at least, should have positives made of them, as insurance against injury, fire, breakage, and so forth. One has only to place a new plate in a printing frame, behind the positive, and a new negative is secured. Sometimes a number of negatives are made from one positive, in case many prints are desired.

It is feasible to print clouds, from a good cloud negative, into another negative, which one feels would be improved by clouds. One holds a sheet of card board about at the horizon line and moves it up and down, near the new plate, for the minute or so of exposure, thus softening the blending point.

## LANTERN SLIDES

As means to interest merely, or as combining interest and instruction, lantern slides have never been surpassed. They have been somewhat overshadowed by moving pictures, but for beauty and real worth or use they are of the greatest value.

Apparatus is sold for the rapid and convenient making of lantern slides, or they may be made by the use of the reducing and enlarging device, already described. One would not require both devices. The lantern slide is a positive, or a picture on glass, and is usually developed by a formula especially adapted to it, and giving a strong contrast. The slide must be very clear, so much so that by comparison with an ordinary positive which requires soft detail, one would say it was not good.

The slide affords an admirable method of entertaining friends. If one has made the water journey through northern Maine, or to any remote or highly interesting and unfamiliar region, the slide is the thing.

Coloring of slides is too much for an amateur to undertake, without some instruction. Most commercially colored slides are too loud and garish in their effects. If insistence is placed on careful, dainty coloring, and the avoidance of broad brush work, fine results may be had. The ordinary slide is not worth

while, when colored. An occasional professional, entrusted with work the continuance of which, it is plainly understood, will depend on quality, may be induced to be careful. The temptation to slight slides is strong, as many can be done carelessly, as piece work, in a short time.

The modern lantern is compact, using, ordinarily, a 400 watt light, attachable to any outlet. Larger power is scarcely required, unless thousands are to see at once. Larger power requires a heavier circuit and so must be attached to a special outlet.

In slides, as in ordinary prints, care in masking is important. The part of the slide to show should be determined by the application of wide or narrow mats, to suit the subject.

This is just as important as the trimming of the print to the artistic shape for the particular subject.

The sloppy work of adjusting the curtain and the lantern often results in a poor showing. The curtain should be clean, fairly smooth, and not very near the floor. Its size should permit the slide to show fully at top and bottom. Failure in this is common.

Sitting at a strong angle from the curtain shows a distorted image. Heads of persons or hats, on each side a central aisle, are to be forefended by tests beforehand. Raise the lantern or the curtain or both, or vacate the seats, usually only two, that interfere.

Avoid a lantern with a vibrating front. Steady the front by a rest. Use the rear focus of lantern to secure sharp corners in image. Set both focuses. A taut bellows may shrink during an exhibition.

### RETOUCHING

This, also, is a trade, but many amateurs have attained deftness in it, and especially have done bold scratch work about portraits, which utterly changes their character, sometimes to advantage.

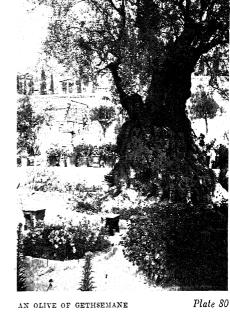
Face retouching requires a frame made for the purpose, and delicate application of the pencil. In these days, the overdoing of retouching has passed. Yet, even now, portraits are seldom satisfactory to ladies, unless a very dainty, smooth skin is shown in the print.

Hence, portraits of men are more enjoyed by a photographer, who possesses a spark of the art spirit. He is often permitted to make such portraits with all the character lines retained.

A portrait photographer is the most patient and most maligned of mankind. Even a president of the United States can scarcely come in for more criticism, even reviling. The lack of charm in the subject is laid at the door of the long suffering operator. Happy he who combines those qualities necessary to please his female clientage. Such a man is a diplomat of the highest grade, a man fit to stand before kings.

The retouching of landscape negatives is another department. The most usual requirement is to get rid of the telegraph pole. There have been those, like Pennell, who frankly put them all in. But the man who can see anything picturesque about a telephone pole, would find a good word for the devil, and would think a gallows tree charming. For the pole is a gallows tree. Happily, war has been declared on them. Per-





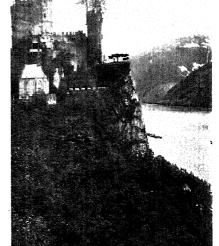
JERSEY BLOSSOMS

Plate 79



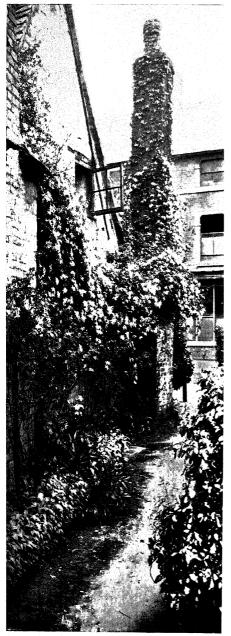
A DORSET HILL ROAD, ENGLAND

Plate 81



RHEINSTEIN

Plate 32



CLEMATIS DECORATION

Plate 83

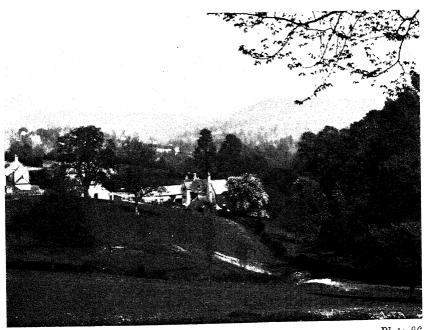


ITALY, THE WELL AT SORRENTO

Plate  $\delta$ 



ROSS-ON-WYE



PITCHCOMBE FARMS



DURHAM Plate 87



A DECORATED ROOF, IRELAND

Plate 88

haps wireless will do away with them. But just now they are the bane of country road work and spoil more compositions than all other obstructions whatsoever.

Holes in the sky, if it is thick, are easily stopped. Places too thin, as the dark corners of pools, or very heavy foliage may be lightly stained a pale yellow. Anything heavier will only blur the image. A blank road may sometimes be cured by working in wheel tracks. But most themes that are bad are bad for good. Little work is required on really good landscape negatives.

If only one print is required, shading with a moving mask, during exposure, will hold back too heavy shadows. A mask made to fit over the printing frame, and consisting of layers of tissue, each retreating a little, but thickest where most masking is required, is another device.

Unevenness in negatives by no means always indicates wrong exposure. The subject may be so full of contrast that bad results cannot be avoided, as when a huge black tree is in one side of a foreground and the sea is on the other side. Manipulation, "iso" plate, color screen and special handling during development and printing will overcome nearly all troubles. An impatient person can never produce fine pictures.

#### THE CHOICE OF THEMES

An orchard is not good unless something comes into the picture other than rows of trees, however beautiful. Combinations of orchards with dwellings, walls, lanes, streams, are to be sought.

Streams, beautifully wooded, are as good, all in all, as any other class of subjects, and better than most classes.

In America pictorial cottages are rare. Abroad they abound. The little house in America, if it has a bit of vine, and especially if it is weathered, or of stone or brick, and by no means new, may be good, with a good approach—a curving drive preferred, and never a trim drive. The ribbon road showing wheel tracks, with a strip of turf between, is good.

Birches were the first, and are still a good theme, but never alone. Noble elms, road bordered, suggest charm. Maples, being a solid body of foliage, with a less graceful top, are not as good.

The buttonwood is a most picturesque tree, and it has a habit of growing in strategically good spots for pictures.

The majesty of great oaks lends itself to fine composition.

Gardens are almost always disappointing except in color, and even so they require some outstanding high stalks, like the hollyhock, the larkspur, the lupin or some showy flower. Gardens require something good behind them, and invariably a path through them. Formal gardens are bad. Generally speaking, the finer a dwelling or a garden, the worse it is, pictorially. It requires mellowness, unconventionality, and a sociable suggestion to attract the heart, far more important than attracting the eye. The sentiment is a large part of the composition. A large picture dealer in the West said, "I want pictures such that people will look into my show windows and cry." It is obvious that he meant he desired those themes which would revive the dear old memories and stir the tender emotions, like the Swimmin' Hole, "the deep tangled wild wood," the old barn door, the cows in the lane, the sweet apple tree by the wall.

The tufts by a low stream bank make a good foreground. Waterfalls are not often desirable; minute descents, merely making white water, are better. Deep dells are not cared for.

Bold rocky roads, with overhanging hills, appeal to men, and to please the ladies is more important—at least we always say so.

Evergreens, where they occupy a considerable portion of the picture, are almost never successful. Barways and old gates are excellent details, and sometimes form the more important features of a composition. Water invariably enlivens a picture. A curved strand with a canoe resting on it is an invitation.

It always seemed to the writer that the proper person or persons sitting at an open window, and toying with spring blossoms was a good theme. The public will have none of it.

Magnificence is not for the camera, as a rule, but it is the sweet, the homely, the little and the intimate that charm.

Boating parties are not good, as the contrasts are too great. But a person fishing in a boat, if his back is turned, is tolerable. Persons out of doors are seldom desirable features of a composition.

## PRINTING PROCESSES

THERE are a great many of these, but nothing equals the old platinum process for beauty—and expense! About the time the great war broke out platinum was worth much more than gold, owing to demand for jewelry. With the war it mounted again, and was finally commandeered. When purchasable, it cost five times as much as gold. So called substitutes now provided, give an effect as good; whether it endures or not, time will tell. But the process of working is more tedious and more expensive than the platinum, and the paper itself costs more than platinum once did.

The purpose of both these papers is to produce a print without any film whatever on the surface, so that the effect is a rich black and white (or sepia, if desired). The color is good, and beyond the slight yellowing of time, permanent.

Other papers which when finished have a film surface, not only curl badly, but their color tends, at least in bromides, to an objectionable bluish white. Bromides are very popular, because enlargements upon this paper may be made directly from the small negative to any size required. With platinum and its substitutes one must make an enlarged negative to print in daylight, as the paper is much slower than the silver papers.

There is a trifle of platinum in the substitute paper. In the real platinum paper it was possible to get from the settlings and trimmings half the cost of the paper, in platinum recovered.

One may color the platinum and its substitutes with success. The other papers not only color poorly, but the results are miserably bad, and lack all character. The coloring of platinums or substitutes may be done on the bare print, but the paper has, by the time the washing processes are finished, become somewhat porous, so that the color sinks in too much, and colorists often go over the work twice. Therefore, it is usual to apply a sizing of amyl acetate by careful brushing or floating. After the sizing dries one may proceed to color. The color lies on the surface and is far more lively and effective, owing to the preparatory sizing, as well as being easier to apply.

Winsor and Newton's colors are as good as any. Body colors should not be used, unless one wishes to produce the effect of an oil painting, which the writer does not consider ethical in this connection.

Chinese white must occasionally be used to cover blemishes in paper, which sometimes has black specks in it, especially since the war. But most prints which develop any spot at all are thrown away.

In coloring there are a few simple rules, from which no deviation should be allowed. Never build out anything not found in the print. Do not attempt pretty extensions, or foliage that does not exist. Use quiet tones, and avoid overdoing. On fine work stipple, do not brush. Keep the background very indistinct and soft. Any clear definition of the background destroys all perspective and ruins the print. Be patient and slow. Do not attempt any broad strokes or the imitation of original water color effects, as the result is tawdry, and not ethical. Perseverance and fidelity,—with such share of good taste as the colorist has, may produce good results. The author is bothered with an avalanche of mail on this subject, but he is not conducting a correspondence school, and cannot go into any further details, which are unnecessary to the intelligent. There are no mysteries or hidden processes withheld.

The author is not taking up the cudgels for colored photographs, to prove that they are art. Inasmuch as they cut out shoddy water colors, of course, they are objected to by the persons who produced such water colors. The real artist feels no hostility to colored photographs. They do not compete with him, as they are in a different class. But they have been found a boon to millions, as an advance on the chromo, and as depicting certain subjects otherwise unobtainable.

Sepia processes, by periods, seem to come into vogue, but for the most part people who do not care for color prefer their prints in black and white. Against this judgment not a dog dare wag a tongue.

Glossy prints, however, are always bad, as prints. Mat surfaces, or rough papers, are best, unless one is seeking details for reproductions. In this case, that is, for the making of half tones, for books, glossy papers are the only proper vehicle. Any print loses by the half tone process.

The platinum and similar papers do not, in printing, show the image fully and plainly, but in a veiled fashion, and appear underprinted and dull, until they are developed. It requires a little practice, therefore, to know when such paper is sufficiently printed. The work should be done in sunlight or strong diffused light, as dull light requires hours. Care must be taken of these papers not to expose them before printing to anything stronger than common artificial light. In examination of the print, the printing frame should be turned away from the light, and opened as briefly as possible.

Papers should be kept in a cool, dry place. Since most climates are humid at times, these papers are hermetically sealed. They should never be opened in damp weather. A damp print is dull. Paper cannot be saved for subsequent printings, unless carefully sealed either in very dry air, or with a chemical absorbent in the can, to take up moisture.

Haste in carrying through the baths in less than the specified formula time, is injurious, and the washing must be very thorough. In warm weather ice must be used. If prints become too soft the surface rubs. The drying is by hanging up. Only printing out papers are placed on squeegee or blotter surfaces.

Printing of ordinary papers is done in a dark room, by artificial light, and is rapid. Printing machines are used by active professionals. The amateur may load in the dark, turn on his light the required second or so, and repeat the process.

#### DISPLAY OF PICTURES

THE old method of assembling prints in albums is a good one—for most prints,—for then one is not obliged to see them all the time. If the print is good enough to see, it is suggested that any tour, of a week's or year's duration, at home or abroad, may be recorded by pages of notes interspersed with prints illustrating the district being described. There is a double advantage in this method.

Presuming that people travel in the hope of retaining impressions, it is probably true that a very small fraction of impressions will be retained, unless something is done day by day, during the journey, to fix them in mind. The writing should not be done when one is before the subject, but as soon thereafter as may be, at evening, or on a dull day. The picture must be made, and the subject enjoyed as it is being seen. The folly so many commit of reading guide books in the presence of the subject defeats the purpose of travel. It is an invariable mistake even to have a guide book in the hand. One can, in traveling, buy photographs better than one can make. But they are the photographs of conventional things, such as everybody else has, and are not necessarily, nor even usually as characteristic of the country as odd little things that the camerist finds for himself, and thus gains peculiar interest for his journey. A careful pictorial review by camera, kept of a journey, enhances tenfold the advantage of travel. A review of a journey thus holds more incidents and freshens each incident. Further, such a review stimulates thought, and suggests many meanings and inferences which were crowded out at the time of a journey, which, in our short span, is always too brief.

If one obtains, with a small camera, pictures fit for wall display, it is far better to enlarge the prints. A little print on a large wall is bad for the print, bad for the wall and bad for the reputation of the person who puts it there. It is bad to arrange prints like steps rising on a wall. The worst of all, however, is the device now happily going out, so long in use in newspapers, of cutting the prints with grotesque curves and placing them at odd angles, in what was euphoniously called a grouping. The only allowable departure, and rarely allowable, from a rectangular print is an oval. Even a square is bad. Paintings, except the "Madonna of the Tub" follow this rule.

A fad has come in, beginning apparently in the remote West, of framing prints without a margin. From time immemorial the art canon has been that a print, or a water color should be framed with a plain margin. Tastes may change, but fashion can never change what is intrinsically good taste. However, with or without a margin a frame should be narrow, and never made up of a mixture of colors. The public requires a "two tone" frame (both tones bad). Walnut veneer, mahogany, a plain narrow black, even a plain gilt are all allowable. This is a statement of what ought to be, not what is.

Then in hanging, an absolute level is required and double hanging, a method of insuring that the print is not tipped is recommended. Chambers are the natural rooms, or dens, for personal pictures, though if the pictures are good enough they may find their way into the best room of the house. That is as it may be!

## THE CARBON PROCESS

WE all recognize that no process of photography is so delicately beautiful and faithful as the carbon print. The process

does not make the progress in America that we could wish. The writer at one time employed this process, but did not find the public at all responsive.

It consists in coating a pigment surface with a solution, rendering it sensitive to the light. No image whatever appears on the print, which is developed in tepid water. That part of the paper which comes under the influence of the light on the bichromitized gelatin becomes insoluble. The high lights and half lights, not being thus influenced, dissolve away, in the daintiest possible shading.

This is not, however, half as simple as it seems. The carbon tissue, after exposure, is transferred to another paper by carefully perfect contact, when wet, thus bringing to the surface the back of the original carbon film, the original support being freed by washing.

In the development the application of water by pouring here and there may be made to increase the solvent action of the water, and thus to bring out any desired emphasis of light and shade. A very high class carbon printer sometimes becomes, by the union of good taste and deftness, a combination of artist and artizan.

Marvelous effects of sky, and an almost unbelievable fidelity on a portrait may be obtained. Those who have had much experience with the process scorn any other as wholly inferior.

The carbon coating is supplied in black, blue black, green, or almost any other color, so that a theme may be rendered in the scale best adapted to it.

Paintings are particularly fine, copied in carbon. The process is, or has been, largely used in printing large work of the classical and architectural sort.

One observes that the print thus produced is reversed. This

may make no difference in an ideal landscape. But if it is desired to show anything as it appears to the eye another process of transfer to a final paper is required. This requires an adhesive preparation.

The delight of manipulation is an attraction. Only care and experience can produce good results, but what results those may be! We recommend for the beginner the learning of this perfect method, since mastery of it is a highly worthy attainment.

#### BROADER APPLICATIONS

Photography is displacing carbon paper in copying correspondence. The blue prints of all architectural or other working plans are photographic. As photography means lightwriting the extension of its use in connection with the radio and the telegraph is likely to be very important.

Perhaps the most important use of this alluring chemicoartistic process is in map making from the airplane. It has been found that the geodetic survey can work more rapidly by photography and can win results practically impossible without it. Of course, in war its use from airplanes is of prime importance.

The line engraving as well as the half tone is a photographic process. The gelatin process of reproduction by photography is far more perfect than the half tone, but admits of fewer impressions than the latter. Of course that process of television, in these days creating such an absorbing interest, is also a kind of photography, and in time may be the greatest of all.

In all the arts of design, whichever way we turn, we project

our thought, our art, our invention by photography. There seems no end to its application, from intricate to simple processes, that require merely water for development.

#### THE TRUTH AND PHOTOGRAPHY

ONE often hears the phrase "photographic accuracy." There is no such thing. The lens may be made, and sometimes has been made, a consummate liar, because it deceives by half truths. On a certain occasion a libel was perpetrated by placing, in the method called faking, two persons together on one plate. They were persons who had never met, and the crime consisted in seeking to fasten an evil construction on one of the persons because of the supposed meeting and the attitudes. A young friend of the writer once made a prize ox into a picture of an ox facing both ways, the juncture of the duplicated foreparts of the beast being so perfect that the eye could not detect it. The camera may be made to record evil, as well as good, but in the proper hands, that is, improper hands, it may be made to tell a great many things that are not true. The use of the camera to photograph celebrated persons is often an outrage, from the manner in which it is done. But on the theory that the cat may look at the king, the common law, probably wisely, permits these wrongs, lest a prevention of them should involve greater wrongs. Just so we permit free speech, which permission the vicious, or the crank, take advantage of in a manner to -harm society. The courtesies of the camera will, of course, be observed by gentlemen. Persons should never be photographed without their permission, unless, perhaps on the occasion of a public procession or something of that kind. The golden rule,

in photography, shines, when observed, with peculiar luster.

It occurs daily, however, in a foreign journey, that permission to make pictures on a private estate requires too much time to obtain, so that it is not worth the red tape involved. Nor is a thing always worth while, merely because it is forbidden. We have ever found that the simple byways, where one is always welcome, have more to record than the great high road. And the interior of a cottage is always more interesting than a magnificent room, which lacks the sense of personality and intimacy. The subjects an artist would choose are always available for the humble photographer.

The illustration of estates is sometimes desired, and it is, if one is well known, or has a letter of introduction, easy to get permission for such work. The rudeness and intrusiveness of press reporters, and some others, have naturally put citizens on their guard. An irresponsible "fiend" can sometimes make others very uncomfortable, whereas if a camerist possesses the least courtesy, he will, by such unwarranted intrusion be, himself, most uncomfortable. The camera was not designed to become one more horror in modern life, but a source of joy, a convenience, and often a means of doing a favor. On one occasion an Italian peddler asked the writer to make a picture of his horse. Being informed that was not the sort of work done, the Italian, wrongly presuming it was a matter of costs, said "I don't want a cheap picture of my horse." A second look showed a sleek horse, beautifully equipped. The proud owner was a very good American,-for this occurred here,-and a real asset in our country. One who can use a camera with any deftness is in a position to give pleasure to friends. As an umbrella is something to protect a friend, rather than to stick in

his eye, a camera is to do a service, not to use viciously, or carelessly.

A curious use of a camera was established by a foreigner in high position. He kept a concealed instrument at a point where a caller at his door came into focus. A negative was quickly developed, and the magnate, scanning it, formed his conclusions (having also the caller's card, and his business stated) how he would meet the caller, or whether he would be "out." In this instance, the magnate, having a procession of persons calling, who wanted something, found the practice convenient. Perhaps the same scheme is in use on many occasions when the caller is wholly unsuspicious of the fact that he has been seen before he has arrived! It is a modern way of accomplishing what the patron of old did by coolly making an estimate of his caller through a peep hole! There is a suggestion for a novelist here, for the imagination may go far on this theme.

## GOOD HUNTING GROUND

On the Atlantic coast Maine holds the palm for bold, rocky headlands, which extend for thousands of miles. Inland, there is a paradise of lakes, which, however, are not as good as the streams, photographically. The short coast of New Hampshire has a few fine rocks, and the shores of Cape Ann are bold, but after that as we move south the rocky shore ceases with Cohasset, excepting only at Newport and Watch Hill. Thence on to the bounds of Mexico is only a sandy beach, or a lagoon. New Hampshire, in the southern portion, has good old houses and farmsteads, while in the north the White Mountains

beckon. But mountains are always to be pictured from the valleys. The novice will be awakened from a disappointing dream if he attempts to get good pictures looking down into valleys. The camera is wholly incapable of giving the appearance of depth. But a moderate elevation above the camera, and near at hand, shows up with great impressiveness.

Vermont is winsome for its low green slopes above fine valleys. Massachusetts and Connecticut are the states for good old dwellings. Apple blossoms are found everywhere East and West, but we may designate as excellent districts Worcester County in Massachusetts, the Lake Champlain region in Vermont, central New York, Michigan, Maryland, and eastern Washington and northern Oregon.

The valleys of the Connecticut and, par excellence, the Hudson are best, in the East, for broad river effects. New Jersey, in the northern section, is often fine. Pennsylvania is the most attractive farming country, because the good farms are often in a rolling country. Its wilder portions, in the higher hills, offer much.

Birches are supreme in the Adirondacks; and are fine, also, from middle Maine through the states westerly into Michigan.

Western Maryland and Virginia are rugged regions. Eastern Virginia is a quieter district, but its historic homes are a lure. Western North Carolina is to be commended for good mountain paths. The highways of this State are now among the best. Charleston and its environs have good gardens and old houses.

There is, in Florida, an upland central region, with lakes. The finest marine shores are in the region of Rocky Ledge.

Kentucky and Tennessee are unexploited fields, inviting for their mountain districts. Going west from the Alleghanies, the

shores of Lake Superior and the lake districts of Minnesota have good sport. The Ozark mountains of Missouri are always calling.

The bold Bad Lands of North Dakota are picturesque, but somewhat bare.

Of course, if great wheat field operations, or corn gathering, are to be pictured, the entire states of Iowa, Nebraska, Kansas and Oklahoma are open to us. Nothing gives a more opulent sense than the clean cut side of a wheat field where the reaper has just passed.

Colorado has a wealth of grandeur for us in the Garden of the Gods, in its canons and on its mountain trails and in its hill orchards.

Utah has, of late, been coming into its own, in the opening of the Zion Park region. The State is one of a few in the lead as to attractiveness.

The Glacier National Park is secure in its secluded, awesome majesty, and the Yellowstone is well adapted for pictorial representation. In the Southwest the Grand Canon disappoints, unless it is pictured from below. Idaho has much for the camerist.

The State of Washington offers a variety of subjects which ought to satiate the most enthusiastic. The ranges of the Cascades and the Olympics as seen from the shores of Puget Sound, and the homesteads with their orchards in the older parts, take us from the sublime to the intimate. Oregon, in the east, has much the same charm as Washington.

California, with its thousand mile reach, doubtless invites by more contrasted beauties than any other state. The Shasta neighborhood, and the little known coast district, in the north; the wooded grandeurs near San Francisco, and the great

tree wonders of the Sequoia National Forest are enough for a season. But the shores around Monterey, and many other local centers of beauty on the coast to, and including, Santa Barbara, have always held the loyalty of the writer. In the southern part of the State, between coast and mountain, orchard and garden, with the fine achievements in architecture, there is a plethora of beauty. The Yosemite crowns all.

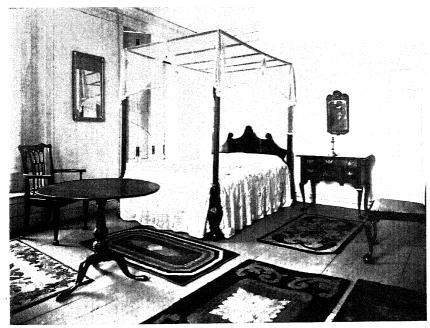
Alaska offers the noblest effects of grandeur in mountain and shore scenery to be found on any continent. The great Asiatic mountains rise from lofty table lands. But in Alaska one may have the glinting ocean bays in the foreground, and the awful height and purity of mountains just beyond, rising nearly four miles heavenward in white sublimity.

#### CANADA

THE maritime provinces of Canada are superb in their orchards. The scenery in the provinces of Ontario and Quebec along the rivers is often magnificent, from the terrific roar of its vast northern falls to the attractions of the rapids in the St. Lawrence. The quieter farming districts in the rolling country are excellent.

Assiniboia, Saskatchewan, and Alberta are wide realms yet to be conquered by the camerist. There is a great part of each of these provinces where stream, lake and mountain lie awaiting someone to record their glories. With the exception of the region about Banff little has been done in this way.

Columbia, for the richness of its farms, the magnificence of its forests and its high mountain valleys, is behind no part of Canada in attraction.



A CHIPPENDALE CHAMBER

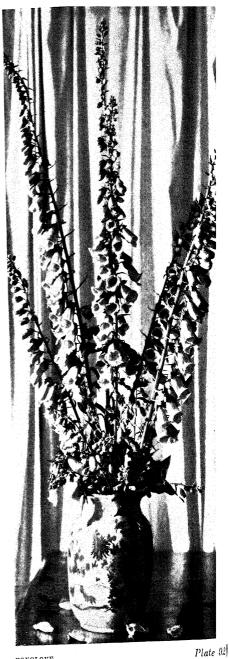
Plate 89



CUTTING A SILHOUETTE

Plate 90





FOXGLOVE

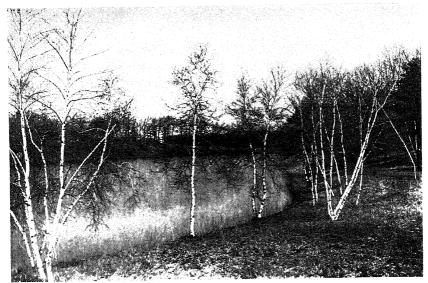


DUNLUCE, IRELAND

Plate 93



HEREFORD



RHODE ISLAND, MORNING AMONG THE BIRCHES

Plate 95

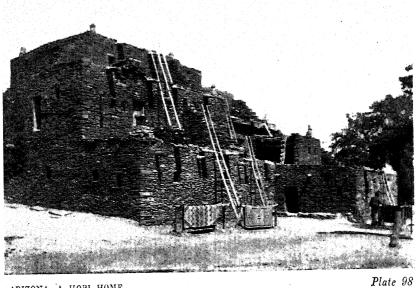


NEW JERSEY, RUSSET AND GOLD

Plate 96



Plate 97 LOUISIANA

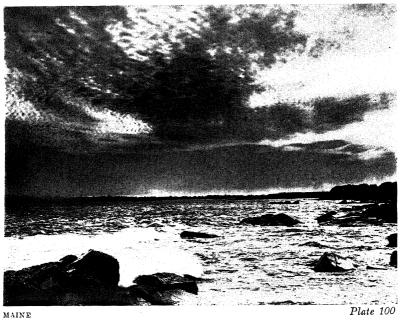


ARIZONA, A HOPI HOME

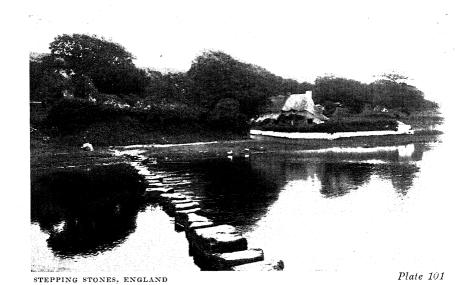


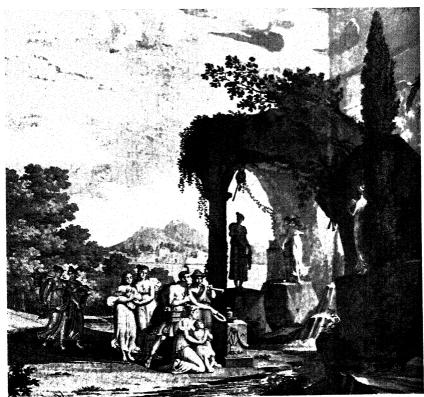
VERMONT, THE BATTEN KILL

Plate 99



MAINE





WALL PAPER-THE ALTAR

Plate 102



ENGLAND, THE NEST

Plate 103



ENGLAND, BELOW THE ARCHES

Plate 104

#### OTHER PARTS OF AMERICA

Mexico and the southern continent are unknown to the writer, beyond a mere touch. The explorer, of course, has his opportunity here, traveling with a light camera. The engravings and the occasional photographs brought out of Mexico and South America call to our attention the ancient civilizations of the Montezumas and the Incas, the Mayan mysteries, as well as the remote grandeurs of the Andes, now passed over by railway from Chili eastward. The entrances to the harbors of the greatest southern republics are notably dignified front doors to these broad, thrifty and prophetic expanses.

## EUROPE

THE author has "done" Ireland with an apparent degree of thoroughness, but no country of its size and attraction can disclose all its beauties in years of time. Scotland has been covered in part, and England and Wales.

Southern Britain lacks, in almost no one of its parishes, subjects of an absorbing interest. There is no region on earth that equals England in rural charm. There is more that is pictorial in England, to the square mile, than can be found elsewhere. New England has a contour perhaps more attractive, but the English cottage, manor and church are not here. The flocks of sheep and cattle with the English village background leave so little to be desired that the camerist may set up his rest for years in England.

Wales is beautifully wild. Its streams come tumbling down in picturesque confusion, between the craggy mountains.

Cornwall and the lake district for ruggedness, Devon for fine green heights and hidden valleys, Kent for hop fields, the Norfolk broads and the fenlands for a Holland-like country,—these are outstanding. The Cotswolds, for stone villages, are favorites. The Peak region the English think wild, whereas we see its elevations less, but its charm not less. All about the quiet counties, with little in the way of elevations, like Warwickshire, Oxford and Cambridge, we find history enshrined in architecture, the monuments of learning or devotion, the expression of a solid, believing, persistent race, that has expressed itself by the manner of developing and adorning its acres.

The bolder coasts of the South and East of England, its unique downs, its incomparable little rivers, make their attraction so great that one can with difficulty break away. One cannot name a county in England that has not much for the artist, the student, the romancer. England has been wonderfully done in a series of books in which exquisite water colors abound. But all the more, an explorer of the beauties of England is inveigled onward to try what he can do, and to carry away, for the solace of distracted hours, those little images of rural paradises which, outwardly at least, show us how to live.

France holds much for us in the North, though the Southwest and Southeast have mountain stretches with little cities, fortified or otherwise, but never without their peculiar merit. Its stone villages are the delight of architects and dreamers.

Holland, to those persons who love the quaint, abounds in themes, such as canals, old cottages, cheese markets, city halls,

and genre subjects. It is true that Holland has not as much variety as England, but in its special class of attractions it is preëminent.

Belgium is the surpassing region for the quality of its dwellings. Their quaint carvings, within and without, are distinctive and in this particular better, even, then we find in England.

The Rhine will disappoint the camerist until he sails up it to a point where it narrows, and gets away from the flat country. From that point, to its source, it leaves nothing to be desired pictorially. Bavaria and Saxony have many rugged outlines, which furnish material in such abundance that one never knows when he has had enough. The level portions of Germany are not as good for our purpose, but, of course, here and there are themes of importance.

Austria is not behind any part of Europe for its picturesque castles, and glens and mountains. To speak of Switzerland is to speak of what everyone knows, but the charm of the Swiss chalet, backed by its mountain or facing a lake, is a subject not to be overlooked.

The eastern portions of Europe the writer is not acquainted with, but the examples of work which have come in small quantity from those regions are promising.

The Scandinavian regions are an inviting summer theme. The striking fiords and bold cliffs form one side of the picture. The farm houses in Scandinavia are a thing apart. Their quaintness is now much copied in America. They afford wonderful compositions, especially in conjunction with scenes of farm labor.

Spain is packed with the picturesque. Its roads are the best for scenery of any in Europe; we need not except Switzerland.

Castle, cottage and monastery, crag, stream, fortified bridge and vale, all open upon the advancing traveler at every curve of the highway. The uniform courtesy of the people and the presence of the rural police make a Spanish journey a pleasing and safe way of putting oneself into the romantic and beautiful ages.

Northern Italy calls by its natural scenery, and the other parts of Italy by their ancient remains, though Venice, the Mecca of dreamers, in the North, and the Appenine heights of middle Italy are among the exceptions to the general statement.

The islands of the Azores and the Mediterranean are bold mountains in the sea. The "isles of Greece" have ever stirred the human imagination. They served to make explorers of the ancient maritime peoples, from the Egyptians, Sidonians, Greeks, Carthaginians, onward, culminating in the maritime empires of the Italian states.

Greece offers an opportunity to the scholar or poet who also uses a camera. The way of the seekers for the Golden Fleece is romantic, and set with bold shores, particularly picturesque about the Dardanelles, the Bosphorus and the Golden Horn.

Palestine has still to be carefully explored by the camerist. The writer has done a little work there. Others have done more. But it is possible, with the camera, to record the history of a land which, for pathos, and for inspiration, stands alone. There we are in the presence of all the past and a hopeful present.

A number of sites have, lately, been verified. Great interest, of course, attaches to anything of this sort, for it is in the nature of news, as well as being sometimes capable of artistic

representation. At the tomb of Abraham we have, as an instance, an ancient, undisputed site. One is thrilled to be before a location never challenged as authentic. It has been in the possession of races, whose creeds, whether Jewish, Moslem or Christian, all led them to revere the spot. Sites in the craggy lands of Judea, and the lone Wilderness, appeal to the romantic, the devout and the artistic.

#### AFRICA

SINCE France and Italy have made the shores of North Africa safe, and its hinterland accessible to the bold, a new field has opened to the camerist, and there is a broad range of themes from the mountain and desert and oasis behind, to the strange cities and ruins of the shore. Egypt, of course, has ever offered its challenges. An American youth, a boy in fact, long ago passed from the upper Nile to near its mouth. This exploit of William G. Erving, of beloved memory, son of H. W. Erving of Hartford, is probably unique as a lone exploration tour in that region by one so young.

The author has not yet explored India, China and Japan, or the continent of Australia. But Japan is known as the home of natural beauty for many centuries, and for the perfection of art in its type.

Tasmania and New Zealand, as samples of their beauties have been shown to us, are undoubted fields for the enterprising lover of the picturesque.

# The Whole Earth is Filled with Thy Clary

## MEETING TROUBLES

In the course of an excursion with a camera difficulties may arise which can be dealt with on the spot without abandoning the trip.

The lack of a dark room can be overcome by shielding completely the single window of a hotel room. A large focusing cloth and a blanket may answer one's needs. One of the big men, physically, in England, used to tell me of crawling under beds, the sides of which were masked by blankets. One day in Ireland my helper, a very small man, tried the same thing. I stood guard and heard him chuckling. "What is funny?" said I.

"I was thinking how glad I am not to be as big as that Englishman." It was the first time he had ever congratulated himself on his meagre proportions.

Plate changes have been manipulated in a black bag, with elastic cuff holes to allow hands inside. In changing cut or roll films it is safer to be in the shade.

The corner of a slide sometimes becomes dog-eared because it is composition board instead of rubber. The blunt corner may be filed or sandpapered or rubbed down. Slides sometimes warp—the best warp most. When they are inserted after exposures, they are, of course, reversed to bring the black edge of the end cleat outward. If the slide has warped it will not go completely home. It may be sprung with the fingers and tried again. If this effort fails it should be placed by itself or written upon "exposed," without turning the slide over.

The writer always travels with a hand ax. In a wild or abandoned country a stub or a sapling may spoil the scene and may

be removed without trouble. One should also carry an old fashioned jack knife.

If the ground glass breaks, a piece of it, if at least one side is straight, can be moved about until every part of the subject is examined. In this way fine scenes have been preserved. A good ground glass cannot easily be obtained. It would not be a half bad idea to carry an extra one.

The fall of a camera looks like a wreck, perhaps, but a few minutes of patient adjustment may set it right. If the focusing cloth blows away, as one did into the Avon, at Warwick, use a robe or a coat.

If the sun tends to come too much in the face of the lens, protect the lens by shielding it with the slide. This method helps but it will not, of course, light up the picture properly. In a foreign journey the writer tumbled off a wall on the last picture day, and broke a tripod leg, incidentally bruising one of his own by a stone which followed. One may attach splints to a tripod leg. If the legs telescope, plug the cracks with wedges whittled thin.

Various devices must be resorted to if a higher position is required. A wall, a box, or the use of the car for one leg helps.

When children bother, they may be posed just outside the line of vision and told to stand still! (Is this fair?) A long row of spectators was cleared from a bridge by being told it would cost them a shilling apiece to be in the picture. There was, probably, by appearances, not a shilling in the crowd.

Four legged animals may be induced to look up with curiosity and to appear interested, by making a weird noise at them. It is sufficient if the writer tries to sing! A single note is enough.

If one waits till a cloud rolls by, on the road, he may then [109]

wait till the dust rolls by, then until the wind dies, then until he is nearly dead. Anything to get that picture.

A plate, known to be spoiled, should be taken out and thrown away at once, to avoid further loss by development.

If, after exposure, it is decided the exposure was too brief, a second exposure may be made on the same plate, if nothing has moved.

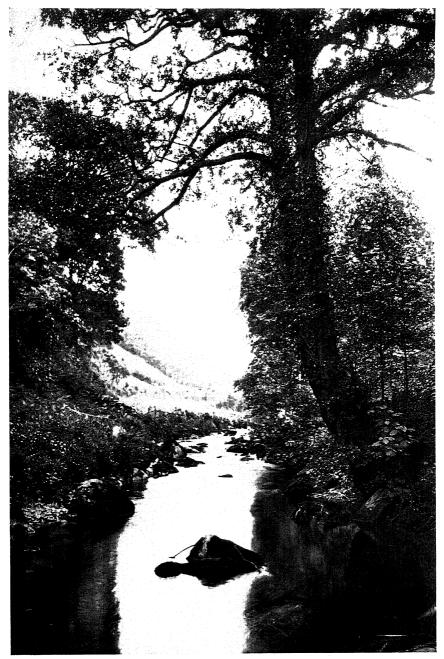
In case there is rain, but no wind, a fine picture may be had by holding an umbrella over the camera.

There are states in which, like Pennsylvania, it is unlawful to leave a car parked unless it is driven off the road, a wise precaution in any state.

We have never lost anything by leaving a car alone. We always lock the gears, but seldom the doors. Nearly everybody is honest. That is a cheerful conclusion, after many years' experience in the world. It is as true abroad as at home. Indeed, there seems to be a greater respect for law in the odd corners of Europe than in America.

The worst difficulty met in travel is the carelessness or ignorance of photographers with whom plates are left for development. It is always better to send or take the work home, if possible. Letting one film lie on another, over or under development, injury to the surface, are faults of treatment so common as almost to be the rule. After all, nobody will take as good care of a baby as its own parents. One may sometimes hire the use of a dark room for development. It will not be a good room. It will leak light and be dirty, but may answer the purpose for evening work.

Filling of plate holders in America is done usually in hotel closets. Abroad there are no closets. The writer would advise the amateur never to work more than eighteen hours a day.



THE LORNA DOONE BROOK, DEVON

Plate 105

The filling is evening work. In summer an unventilated closet is a black hole of Calcutta. An accomplice in crime should wait outside, and, occasionally call to learn if the prisoner has fainted.

A relieving feature is a nap at midday. In eagerness to search out likely subjects one never takes this nap. The scheme always includes it, the practice omits it.

It is bad practice, for nerves, to wait for a luncheon. There is more pleasure in taking a luncheon in the car. Before the war six doughnuts cost a nickel, and as five were enough for a meal, the sixth was given, with a broad gesture of charity, to a small boy. Now those doughnuts have trebled in cost, but they are better. In journeying through those uncivilized states where doughnuts are not known by sight, but only by reputation, one is hard put to it, as Bunyan would say. All doughnutless lands are Sloughs of Despond. The pie country is co-terminous with the doughnut country; so, without pie or doughnuts one is obliged to whet his incisors on cheese sandwiches. In Great Britain there is one delectable dainty, in eating which America and its glories are forgotten. We refer to cherry cake. It will keep for weeks, wrapped in foil, but not where we were. There ought to be a monument to the inventor of this unsurpassed viand. It is bread, meat, sweets and poetry mixed with good will and washed down with ginger ale. After coming into the most intimate contact with this cake, all international problems vanish. It alone settles half the British war debt.

In France, the substitute—and not a bad one—is the croissant. They are so fine in their young moon shape, and so deliciously short, that it is a pity to eat them. About one o'clock the pity vanishes in a consuming affection. A small roll of

butter completes the luncheon, with oranges, of course, the perfect and almost universally available dessert.

We have said that nothing was ever stolen from the car. A bag of oranges, however, will seldom survive overnight in a garage. It is taken as a tip, and we give the tip here.

A drink of water is not as available as one might suppose. A bottle should be carried along.

To return to a picture maker's troubles, a few spare parts may be carried, to prevent spoiling an outing. Tripod screws are sold warranted not to come out. They are always coming out. Carry a spare, and others for the camera bed.

The between-the-lens shutter may fail to work. Carry an outside shutter also. A little camera may be convenient if the large one fails, or for minor subjects. A note book should be carried, and sometimes used.

A plan to get the best of a good country is to return over the same road, timing the journey so as to reach a point in the morning that was on the previous journey passed in the afternoon. Thus all the good themes may be recorded, a thing worth while. It is better to work long in a region rich pictorially than to travel far for the scattering themes. What with an occasional cloud and other advantages almost everything can be secured by going over a road first in one direction, then in another.

Boating, on streams of moderate widths, is not as fruitful of good results as one might, before testing the method, be disposed to hope. It is nearly always necessary to land to obtain a picture. Not only the motion of the boat, but the low point at which the camera is set are difficulties. In exceptionally good themes, not available except from the water, a raft is pref-

erable to a boat. At least a boat with a flat bottom is required, if a camera is to be set on a tripod.

But following a stream bank on foot is far more productive of good results. Here, also, the hunter's ax must not be forgotten.

The playing of a fish before landing is a most difficult subject, possible only on open glinting water and with the highest speed shutter.

A delightful discovery regarding water subjects will be made by noticing that a brook falling gently so as to create ripples may be done with a time exposure, because though the clear water moves it always forms the same shaped ripples, and the motion does not show. Of course, this remark does not apply to a turbulent, loud voiced brook, but only to those quieter streams which murmur contentedly and tell their enchanting tales quite at leisure.

## NOTES ON PICTURES

Plate 1. In the somewhat famous picture, called "Larkspur," we have a subject which has been sought for by the hundred thousand. The composition has that much-to-be-desired effect, a line running away from the camera in the form of a path. At the end of the line we have a cottage as a background. There has been a very curious evidence of difference in tastes, about this picture. Many persons will not have it with the lady plucking the larkspur. This is mentioned as indicating the strength of feeling on such subjects. If, however, the lady is to be included, she is at a proper distance. Figures, in good compositions of this sort, are never obtrusively in the foreground. This print has little value to most persons, with-

out color. The garden, in this instance, permits of pinks, whites, rellows, blues and greens.

Plate 2. "On the Teme," at Ludlow, shows the near, which requires a long exposure, and the far, which requires a short exposure. Ludlow and Ludford on the opposite bank are English-Welsh towns ideally situated for picture tours. The old house tops peeping over the stone bridge, and the broken shadows below, give us one good picture out of a myriad in or about Ludlow. There is no better photographic town, and none which forms a better center for country work. The dales of Wales and meadows of England, the notably good half-timbered dwellings hereabout, and other numerous advantages will quickly appeal to the discerning. Two weeks or more at Ludlow, in one of the quaint inns, place one within reach of most of the best in the west of England and Wales, and afford time to allow the unmatchable church of English village life to seep into the consciousness.

Plate 3. "The Overshot Wheel," with the water coming away from it in a very graceful fashion, and the half timbered end of the mill, rippling water, and even the foliage, in this picture, are all good, and it should be very popular. No one, however, wants it. Nor have variations of it, showing the end of the mill more clearly, been wanted. This is proof positive to the writer that mills of any kind are taboo.

The beginner with a camera seems to have what is almost an obsession for old mills. The writer confesses to the same feeling. There is a strange psychology in the fact that we may enjoy seeking after, and looking at what we do not care to possess. Perhaps the camerist does not make a planned campaign, as a rule. He gathers in what interests him, or what he supposes will interest others.

Plate 4. "In the Garden of the Gods": a heavy shower had fallen and covered what was usually very dry ground with a shallow film of water. Through this, in broken lines, the reflections of the great

cliffs stand out. This is good to have for one's own satisfaction, but it is not such a thing as pleases the average person. Colorado abounds in similar or better themes.

Plate 5. In "A California Pool," there is an attractive pasture scene, with the cow paths. But the cattle are so small as greatly to injure the composition. They ought either to be eliminated entirely, or to be brought up into the middle foreground. The California rolling hills, with their live oaks, are among the most beautiful objects in nature. The writer prefers them to the grander themes in California. The mind of the public is obfuscated by the idea of acquiring some famous object in a picture. Niagara Falls, however, is now passed by for some dainty, beautiful thing, which, perhaps, has no place or name that anyone cares to know about. More and more it will get to be so in the West. It is probable that there is no other spot on earth with the beauty of the Yosemite, but even there its well known, outstanding points of interest have been done so much that many lose interest in them, and wish a composition of some humbler scene.

- Plate 6. Stepping Stones at Bolton Abbey is a theme very rare in any country. The ruin is also beautiful.
- Plate 7. "Entrance to the Harbor of Malta": in this picture, made in a fiftieth of a second, about eight in the morning, looking directly against the sun, we get a night effect. No such picture can show any detail, of course. All such pictures seem to excite a good deal of comment, but not enough real interest. The subject itself was made by the author in an afternoon light also, but themes of this sort are not attractive, in any light, to the popular fancy.
- Plate 8. "Amalfi": this picture of what remains of a sunken city, has proved more or less attractive to the public. The romance of the port of Amalfi arises from the fact that one time it was one of the great maritime marts of the world. In fact, it gave form to maritime law. It is now a much favored resort for visitors.

The Amalfi-Sorrento Drive, which for boldness and beauty per-

haps surpasses any other marine drive known, is a good many miles in extent, and is replete with scenes like this. They are good enough to win upon the average picture lover.

Plate 9. "The Temple at Pæstum": this temple is said to be the best preserved among ancient Greek structures. Curiously enough, it is not in Greece at all, but in southern Italy, where less of war-like destruction has occurred than in Greece itself. Just as the shutter was about to be snapped the herd of sheep came along, and added very much to the composition. Nevertheless, subjects like these are appealing only as large wall pieces for schools. They should, of course, appeal to all classical scholars and travelers.

Plate 10. "The Sheep Pen" represents a homelike scene, but the camerist is warned, that only pictures of sheep in the open, are really attractive.

If there were such a thing as a picturesque sheepfold, that would be different. Even in this case, the upper part is sharply cut off to avoid an unsightly barn, the size of which, near at hand, would have minimized the sheep to a ridiculous extent.

- Plate 11. This is a subject, that though interesting enough in black and white, draws redoubled interest when colored. The bold crests against a light sky are particularly bold, and striking.
- Plate 12. Harper's Ferry. Canals must often be followed for many miles before they afford good compositions. In this instance a mountain and a curve help the distance, and an old canal boat redeems the foreground. Even so, the result may not interest the general public.
- Plate 13. "The Oregon Stream" gives an effect of wildness and loneliness among the mountains. It also has the merit of dainty foliage. It is, however, a picture for a few. It is pure nature. Were this stream but bordered by a country road, it would be very much enhanced in interest, for the public at large.
- Plate 14. The same may be said on "The Way to Rainier," a variant of the theme, "A Washington Drive." It shows wonderful

timber. It may serve to give a sense of eternity. It may also quiet the minds of travelers in the West, who are afraid of earthquakes. They see these vast masses which have stood for ages, and were old when Columbus discovered America. Yet, it is the pretty, rather than the sublime which comes nearest to the common life.

Plate 15. In "A Washington Drive," we get the effect of the immense size and height of the Douglas fir. The picture transgresses the rule that tree trunks should not be cut off without foliage. In western forests, this rule is inevitably broken. The effect here is sought and obtained, of showing the diameter of the trunk in the foreground, as greater than the width of the highway. We are impressed with the majesty and vastness of this wonderful vegetation, the trees being six or eight hundred years old. It is fair to say, however, that the number of persons who are interested in forestry is limited. It is not a theme that one would think of as popular.

Plate 16. "A Minnewaska Cliff Drive": this is a theme such as interests men more than women. It is strong and its ruggedness seems to appeal to the masculine mind. It would not attract one woman in a myriad. It belongs to that class of pictures of bold and striking effect which the camerist makes for his own use.

Plate 17. In "An Artist's River" we have a Canadian scene, in which the clouds are shown in broken reflection in the stream. This is always the desirable thing. Had the clouds been a perfect image the picture would have appeared amateurish. As it is, it has good composition throughout.

Plate 18. "Batavia," showing a small stream, indicates the kind of water effect that should be sought for, rather than a perfect reflection.

Plate 19. "A Southern Manor House": This print has two merits. It shows a very good old southern home of the best class, with "cathedral" chimney and Dutch gable. There are also the solid shutters, which are common from Pennsylvania south, downstairs. All

this is seen under the boughs of a great live oak, hung with Spanish moss, so that one feels, instinctively, the propriety of the setting. The daughter of the house, who sits reading under the tree, in a poke bonnet, is an incident to be omitted, or included as desired, according to the taste of the photographer and the lady. Such themes as these ought to be popular, but they are not. In the South there is not yet much eagerness for the purely American subject, but that will come in time.

Plate 20. In "A Banyan Tree" we have a subject of great interest to the botanist. It is a question whether themes like this are to be regarded legitimate for pictorial art work. The picture is more in the nature of a record of what one has seen. This is an important distinction, because whatever is uncouth or strange may have a momentary interest, or be good on postal cards, whereas one would hardly thing of framing such a subject in large form.

Plate 21. Monmouth Bridge Arch. This is an example of a subject usually chosen by amateurs, and such as is found on post cards. It lacks distinction and is of course hurt by the figures.

Plate 22. In "Evening Across the Indian River," we have a Florida effect looking against the sun. The wake across the water is a good element in composition. In this case the sun is drawing water, as the saying goes, although in the original picture this effect is much more marked.

Plate 23. Those who love churches will find England the richest region on earth in small edifices pleasantly surrounded with foliage. In this respect they far surpass the churches of France. If one has an antiquarian flair there is room for combining photography with archæology.

In "The Old Saxon Tower" attached to a church, which was built long afterwards, is an example in point.

Plate 24. "Parlor, Cutler House." The background is of the Hepplewhite Era in its three furniture examples.

Plate 25. In "The Milk Yoke," we have another subject, which really belongs to the genre class. The young ladies are fair and understand how to pose, but the picture does not belong in the class which we would call art. It is of interest in an antiquarian way, because it shows the wooden yoke used by women to carry water or milk or maple sap. It also might be interesting as a portrait for the persons concerned, or their friends. It is well to be warned that such themes are not of very general interest.

Plate 26. "The Schooner Cottage" is a Florida theme. The cottage was built from the wreck of a schooner. Some of the knees form the porch roof. The rail of the vessel answers as a balustrade on the porch. The setting is fair. Nevertheless, it is probable that this picture must be classed with those of local interest only.

Plate 27. In "A Maryland Manor," we have a good country house of the higher class, before the war. This belongs to the district north of the live oak belt. Nevertheless, this picture is merely the portrait of a house, and would not be thought of as a composition for general use.

Plate 28. "A Warm Spring Day" is a very natural effect, but it was secured after much planning. The camera was set up beforehand and the bounds of its field were marked in the ground. The sheep were coaxed along. A strong swing back prevented a bad focus in the background, though the front line of sheep are very near the camera. There was no sunshine, but a powerful diffused light, which is fully as rapid as sunlight. The photography of sheep and lambs must be done before the sheep are shorn, or one must wait till August, or at least July before the new wool presents a good appearance. Very small lambs, while appealing, are not beautiful. From a month old they are most satisfactory subjects for the camera.

Plate 29. "St. Michael's Mount" with a somewhat different name from its French companion is capable of giving one several pic-

tures, according to the state of the atmosphere and the sea. A long focus lens affords much better results.

Plate 30. "A Village Green" is an attractive green in which stands the village cross. The stone dwellings assist in the composition. This picture is made with the much affected soft focus, and is thereby much injured.

Plate 31. "The Tranquil Vale" shows an estuary in Wales, with the mountains, of which Snowdon is the loftiest, and whose topmost peak is hidden in the clouds. A composition like this ought to be extremely popular, and probably would be, with many.

Plate 32. "At Saint Mary's, Taunton," is another picture made in a garden. The apple trees were trimmed back to give the effect of bouquets, a common method in England. The edifice is one of the finest parish churches in England, and so far redeems the picture. Yet this is another of those themes which are very much helped by color.

Plate 33. "A Street Border." A most effective wall decoration. The picture is shown to prove that an absolutely simple house, which would indeed seem like a barrack, has been made beautiful, so much so as to win a very large public, merely by training the flowers on the wall. Here, gardening takes the place of architecture. Themes like these should be done with color sensitive plates, of course reinforced by a color filter. The panchromatic plate is the most effective. It should also be used, always, for photographing oil paintings.

Plate 34. "The Abbey Road," leading up to a fine Gothic gable, but appealing to a very limited number of admirers.

Plate 35. "Scotland Beautiful," is an example of picture-making under difficulties. The space was very confined, allowing no perspective beyond what appears here. A strong wind blew, forbidding more than a tenth of a second exposure. The lens therefore, must be wide open, focused on the cottage, leaving the tree backgound to take care of itself as best it can. Nevertheless the result is appealing to a great

majority of the people, and those born in Scotland who have wandered afar, feed their minds, like Æneas, "on the empty pictures."

Plate 36. "The Royal Palm," a scene in the southernmost county of Florida, is shown merely to illustrate that magnificent subject. Curiously, it has been proved that people are interested mostly in the things that they know something about. There are more persons who know apple trees and elm trees than there are who know palms. The royal palm, however, is so magnificent with its banded pillar holding up the sky, and with its unbelievably rich green, between the main trunk and the foliage, that it ought to be of interest for itself. There are very few persons who seek pictures of and were reared under the shade of royal palms. Nevertheless, its intrinsic beauty is very great.

Plate 37. "On the Avon." There are so many Avons in England that this good illustration of Salisbury is taken by those unfamiliar with the magnificent spire for the inferior Stratford.

Plate 38. "Curling Snow Fingers" impressed the camerist as a wholly attractive subject. The probable criticism would be that the picture lacks life, or fails to tell a good story. It merely shows a winter effect of much beauty. The lack of distance may be an objection to it.

It is probable that since it is so feasible to flit with the birds to the South the admiration for winter scenes is passing away. Many years ago an engraving, or a colored print of a winter scene was an adornment in nearly every home.

Plate 39. "A Canal Curve" is a happy combination of conditions. Canals are as a rule inartistic themes.

There are here; a fine sweeping curve, a distant bridge (not as good as one could wish), spring foliage and blossoms, and last and best a strewing on the water of petals, that float out lazily and really make the picture.

Plate 40. "Christmas Welcome Home": A winter scene with a

good deal of sentiment. The grandfather has brought the young couple with the children back to the old gambrel roofed cottage, for a Christmas visit. Nevertheless, because this is a winter scene, it is not popular.

Any scene with snow prevents the possibility of detail. Faces appear particularly black. Vegetation loses its charm in such a light, unless it is softly covered with snow.

Plate 41. "The Abbey by the Stream" is a somewhat too formal scene yet not without charm. Made in the rain.

Plate 42. The Smoke of Evening Fires, in Wiltshire, is appealing. The street is almost too trim for artistic effect, but the theme is otherwise so good as to overweigh the objection.

Plate 43. "Oak and Resurrection Fern." The live oaks of Florida and California are better themes than the palms. If one can forget that the Spanish moss and the resurrection ferns are parasites one is happier in the gracefully draped and decorated strength of the great oaks. The famous drive is that from Daytona to New Smyrna, perhaps the best for these particular effects in all Florida. One notices however a too great blackness of the tree trunks, an effect that could have been avoided by making the picture earlier or later in the day, when fine side lights would have been available. A picture of this sort requires time, perhaps three seconds more or less, with a 16 stop, according to the density of the foliage. This means that absolute stillness must prevail. It is useless to proceed on the vain hope that as the moss swings, one must be satisfied with a snap shot. The exposure would be so inadequate that the negative would be wasted. Unless conditions allow a fairly exposed negative the subject should not be attempted.

Plate 44. Florida, whether or not it has a broad appeal artistically, is destined to be very much pictured, owing to the innumerable winter visitors there, who have nothing else to do. Thus "Way Down in Dixie" exhibits in a fine manner the combination of palmetto with the live oak overhanging the Tomoka River, near Daytona.

Here is an effect which would have been ruined, had not the water presented a surface like the wind's kiss. The live oak drives, with their Spanish moss are very well known, as on the "New Smyrna Road."

Plate 45. A Walk Under Buttonwoods give an idea of the good effect of that tree which we sometimes name "old spotty." The composition here is not ideal, but only fairly good. One dislikes to see a great object in the immediate foreground pass out of the picture, cut off too abruptly. Other features here in some degree redeem this objection.

Plate 46. The drive along the Indian River, in the vicinity of Cocoa and Rock Ledge, is probably the finest shore drive in Florida. The borders of the lagoons with their sand spits breaking up the water's surface may tempt us, as in "Southern Charm."

Plate 47. "Rock Ledge, Florida," shows palmettos by this altogether finest shore in Florida. By the shadow one observes that the exposure was made too near midday for the best results. The effect is too much contrast.

This particular portion of the Florida coasts contains in a ten mile drive an epitome of all that is best in Florida. It affords perhaps fifty effective negatives. The road should be followed in the morning in one direction, and in the afternoon, on a return trip, so securing all the better effects. The foliage is generally open enough to permit snap shots.

Plate 48. "The Purple Door," an English cottage entrance bonneted by solid purple blossoms, and flanked by a battery of clustered windows is wholly satisfactory except for the formality of the walk.

Plate 49. "The Little Church in the Vale" is an example of a picture made in cramped space. It was impossible to get a standpoint farther from the subject. There were special reasons for desiring the subject, apart from the question of its merits. The front board of the camera was raised to the extreme limit to secure the top of the church tower.

The English cottage is a theme of endless variations, almost always beautiful. "Nethercote Cottage" *Plate 50* is, perhaps, the most attractive that the author has ever found, out of many hundreds. Here, however, is an instance in which color seems to be necessary to bring out satisfactory effects.

Plate 51. "Stourhead Church Path." A fine appeal to a lover of trees, combined with a religious appeal, by means of the church in the background. The path answers in assisting the composition. Yet the theme is a little away from the taste of the multitude.

Plate 52. "Spring at the Mill," Allerford, is pleasing to the author, but not to every one. One of the most attractive overshot wheels in England.

In Athens we have "In the Dionysiac Theatre at Athens" *Plate* 53 where the old seats of the officers of state remain and their names are carved in marble.

The classical scholar who could use a camera might bring back very much from Greece that would enliven his studies.

In Italy one sometimes finds churches of peculiar architecture, influenced by the Saracens. Such is the "Seven Doomed Church of Padua," *Plate 54* and the dome on which one looks down as he comes into Positano.

Plate 55. "Stokesay Castle Gate and Church" is an effective composition of a notable fine half timbered structure. It is helped by the diagonal of the drive, and the distant church, as a subordinate side issue.

In France some of the little canals afford scope for our compositions as "An Oriel at Quimper" *Plate 56* with its fine window at the left.

Plate 57. "Twin Doorways at Coombe" may serve to point out the futility of garden scenes without color.

Plate 58. "Spanning the Glen" is a Welsh scene. A bridge looked at from a diagonal, and with water in view forms a good composition.

Plate 59. "The Expected Letter" is a picture that serves to show the beauty of a Welsh post office. The figure however is too large. Indeed, the picture would be better without a figure.

Plate 60. In "The Shepherd of Bethany" we have a subject which appeals to those who like dreamy softness.

The farm gates of France possess a good deal of artistic merit, notably those where the wall and the gate tops are thatched to protect them from the weather, as "The Homestead Gate in Normandy." Plate 61.

Plate 62. "Within the Close, Wells" is lighted with a fair degree of evenness, and the composition itself is probably as good as could be had from the subject. The foreground is not fully interesting, but the main features are so large that we do not feel that lack so much.

Plate 63. "A Cottage in Somerset" shows, as it should, more of one side of the road than the other. Nevertheless, the road going by the house prevents making the cottage a mere portrait and assists in the composition.

The roads that follow along the canals in Holland sometimes show the "Holland Express," *Plate 64* the playful American name for the three miles an hour canal boat, or we may get a border of blossoms, as in "Dykeside Blossoms." *Plate 65*.

Plate 66. "Baalbec, Syria." Another instance by which the camera note conveys a truer expression than any amount of description. In this case the presence of tourists gives the scale for this vast stone, seventy-three feet long, left here in the quarry, but intended for the wall of the temple near by, where others of the same size are incorporated in the wall.

The camera being capable of making instantaneous notes provides a basis for data to be written up at a later date. Thus it is feasible to provide a much richer record of journeyings than would otherwise be possible.

Plate 67. "A Welsh castle," appealing to the sense of romance, yet it appears, if we count heads, that few seem to be moved by it.

Plate 68. "Flowers in the Window." An example of the English fashion of pleaching the apple trees along the wall. The title of the picture emphasizes the flowers growing in the window. Neither of these themes come out well in black and white, which indicates that this subject, although beautiful, would not be successful without color.

Plate 70. In "Approaching Constantinople" we get an effect too panoramic, but we are showing such a view made from the steamer deck, and another one just beyond, namely "The Tower of Rumeli Hassar." Plate 69.

Plate 71. "Old Venice." The opportunities for picture making in Venice make it the paradise of the camerist. The broad effects of the Grand Canal or the Lido, afford room for the most ambitious work, while the narrower canals and the individual dwellings offer endless studies. The Italian poses, with natural grace, in fact, he seems incapable of doing otherwise. And when we say "he," of course we mean "she," more than half the time.

While the gondolas are going out, there will always be a sufficient number of them to supply the insistent demand of the tourist. The varieties of skyline are infinite in number. There are more good pictures in Venice than in the dozen greatest cities in Europe. A comerist who wishes to advance rapidly could not do better than to make Venice his headquarters for a considerable period. He should learn by test, the capacities and painstaking nature of a local developer. He may then proceed from day to day, using a gondola exclusively for his excursions, for he will thus be able to land where, and when he will. It will be possible to obtain fair pictures from the gondola itself, but only if it is brought to a full stop. A moving boat does not afford a satisfactory stand point for a camerist. The only tolerable effects are from a deck, considerably higher than the water, and an exposure scarcely under a hundredth of a second.

Venice has good helpers in a technical way, being a large city, and

there are the studios of some of the most artistic photographers in the world.

The advantage to the student of development from day to day, is that error may thus be corrected. If the professional developer sees that his customer is a serious student much valuable information and suggestion may be obtainable. A long and delightful season may advantageously be given to this work, though an industrious and skilled man may do much in a day or two.

The combination of architectural study with pictorial work may prove satisfying. If a further historical and legendary study is given the golden trinity is attained. Each branch of study illustrates and adds interest to every other. A body of cultural experience and information may be built up by six weeks in Venice. Such a back ground will go far to alleviate, and enrich, an otherwise humdrum home experience.

Plate 72. "Fireside Joys" may tell its own story. A negative to produce this picture requires a late spring or summer exposure of a half minute, at sixteen stop, with a good light.

Plate 73. "A Dining Room of the Period 1720." An example of commercial photography, which shows the furniture in pretty good detail. The background was burlap arranged for the occasion. It is clear that if more furniture had been included, as, for instance, a complete equipment of chairs for the dining table, one piece would have interfered with the other in the picture. There is some degree of interference, even as the picture is, yet it is important to show as many objects as can be fairly brought out.

Plate 74. "A Charleston Drawing Room." The object here was to get a general picture and to show persons, incidentally. Such a picture as this is attractive to architects, because it shows the details of a very fine southern room, better, in its cornice work, than we find in the North.

Plate 75. "The Lee mansion" illustrates a room very difficult to

photograph, owing to the darkness of the wall, which is of course not mahogany but in a brown tint, somewhat resembling that wood. Cornices in dwellings are difficult to bring out because the lighting is a little too low. The room is one of the very best in America. The time required in such a room is, of course, long, not less than two minutes with a sixteen stop, all windows being completely free of shades.

Plate 76. "Muchelney Cross" is an example of good composition, and a quaint subject, showing how the old dwellings of England blend with the old monuments.

Plate 77. "Dingle-Dell Cottage, Lowden." The sweep of the road, disappearing around the corner of the cottage, the good old wall, the blossoming tree and the waving roof lines assist in a very satisfactory composition. A little smoke rises from the stone chimney. Cottagers will usually coöperate if required by throwing a little material, likely to make smoke, on the fire. This assists in humanizing the subject.

The English cathedrals have been done to death, as the saying goes. It is very difficult to obtain them with a bit of water, but "Lichfield Spires" *Plate 78* is a pleasing exception to that rule.

"Looking Across the Stream at Hereford," *Plate 94* we get a good effect, in which the cathedral tower is somewhat subordinated to the beauty of the trees and the broken reflections.

Plate 79. "Jersey Blossoms" is an example of an apple tree by a stream, a combination that is usually effective. One reason for showing this picture is that it was made in a hard rainstorm. This accounts for the somewhat black appearance of the trunk, but the details are fairly satisfactory.

Plate 80. "An Olive of Gethsemane." This picture is merely a portrait of a tree. To those who wish to study the remarkable conformation of the trunk of the olive, it is important. Owing to its associations, also, and the tradition, of course erroneous, that this

was the tree under which our Lord wept, it has another sort of interest. If the Garden had been taken as a whole, at a distance, the effect would have been confusing and would have afforded no satisfaction whatever.

Plate 81. "A Dorset Hill Road." The magnificence of the overhanging trees would not alone have been sufficient as a composition had not the too smooth road been broken by shadows, and the old castle entrance helped the distance.

Plate 82. "Rheinstein." A castle on the Rhine, formerly and perhaps now belonging to Prince Henry. A typical effect, answering our imagination as to what a river castle should be.

Plate 83. "Clematis Decoration" illustrates an opportunity to secure that somewhat rare composition, a narrow vertical picture. Such pictures are very much needed in most homes, in the spaces between doors, or other panels of this shape.

Plate 84. "The Well at Sorrento." This is a theme that many artists have painted, and it is also very popular with the camerist. The figures aid the composition considerably.

Plate 85. "Ross-on-Wye" leaves little to be desired in composition, except in the sky. There were no clouds. The theme therefore is cut as a narrower panel than would otherwise be used. A wonderful subject for color.

Plate 86. "Pitchcombe Farms." A fine lesson in the sad feature of camera work, foreshortening. The view is one of the most beautiful in England. But in the effort to secure it all on a plate, each good feature, the farm building, and the distant hills are minimized, so that while the result is fair, it is not fascinating.

Plate 87. "Durham." The sky was very dull, without a break, and lowery. It was worth while, because the subject was good and important, to secure a negative.

The general effect is good, but would have been far better with bright weather, or at least a broken sky.

Plate 88. "A Decorated Roof." An Irish cottage with a roof covered by the large white blossoming clematis. This is a theme such as is hardly to be found in America, but the winsomeness is indisputable.

Plate 89. "Chippendale Chamber" of the period of 1760, indicating the somewhat difficult task of photographing white panel work.

Plate 90. "Cutting a Silhouette" is an unusual theme, but as it includes good furniture and is one of Washington's sleeping places, (he slept it would seem, whenever he went indoors) and in the historic Webb house, Wethersfield, Connecticut, it has sufficient interest to attract most minds.

Plate 91. The flower decoration in the long narrow vertical panels, "Foxglove" and "Hollyhocks" required of course the absolute stillness of an interior, color plates, a thirty-two stop, a four minute exposure far from a window, and even so the result could be bettered by a full panchromatic plate. Plate 92. The marvelous development of foxglove as a road side flower in Ireland hardly overbears the tameness of a simple floral scene.

Plate 93. "Dunluce." This most northern and most romantic outpost of Ireland is an impressive example of a feudal ruin. Its history and legend blend in a most dreamy way like the sheen of a fabric's folds changing in the light. The historical student may be exasperated but the poet will be charmed. The heart and the imagination are fed, what ever may be the facts.

Legends are true in the sense that they represent the feeling and thought of a race in a certain period. They are therefore properly reflexes of history and may often be truer than fact in the setting forth of a picture of society.

Plate 94. "Hereford." This picture is made by the breaking of the reflection and the half hidden tower. England is full of such fascinating themes.

Plate 95. "Morning Among the Birches." This may serve to suggest the time of year for picturing the birch. If the foliage is full

no outline of the branches is visible, and the appearance is dark and unattractive to a degree. If, however, there is no foliage, the effect is bare. Small leaves of spring, or the partial foliage of late autumn contribute to artistic results. The water helps here. Had there been a path still more attraction would have been exercised.

Plate 96 "Russet and Gold" appropriately names an autumnal scene in New Jersey. Water bits must usually have, as here, a reach of water leading off into the distance. A round or oval pool lacks composition unless the surroundings are most unusually lovely. Color helps this subject very much indeed.

Plate 97. "Louisiana." In the cities of the south, whether in America or Europe, the street effects most desirable, are these that exhibit some striking or characteristic architectural background. It is inevitable that persons shall be included, unless one works very early in the morning. But an old mammy, or a young negro woman carrying a basket on her head, or a donkey cart may add details that assist in the composition, especially as a donkey, that is one with four legs, unconcernedly refrains from gazing directly at the camera.

Our worst experience in the street scene, was at Damascus, where, in a public square we attempted a vast old plane tree. No sooner was the camera set up than a myriad of boys swarmed in all the branches, and even clung like limpets to the bare trunk. Ten thousand spectators in the square blocked even the line of vision. Never tell us that the oriental is apathetic, or not hardworking. A great part of the city of Damascus was present, and only time was lacking to crowd all Syria about the city. Vanity of appearing in a picture which the depicted will never see is not confined to the orient. But it was an oriental who observed long ago, "Vanity of vanities, all is vanity."

Plate 98. "A Hopi Home." The picture of a community dwelling used by the south-western Indians is an instance of making notes by camera. There is seldom any art interest in such notes, as they must be made under conditions that exist at the moment.

Plate 99. "The Battenkill," Vermont, is a photograph which would have proved lacking in interest without a sky. This picture illustrates the common objection that the landscape scarcely gets sufficient exposure if a thin, that is a strong, sky effect is desired.

Plate 100. "Maine." A sky and shore study very happy in the curdled clouds. Marine and river effects, when the theme is broadly open, depend largely for impression, on sky. These are also themes which may be made on a windy day, providing the camera does not overset. These subjects are very fast without a color screen. With a screen, and a sixteen stop, a twentieth of a second will give a good negative for ordinary printing papers. The rocks are almost inevitably dark. The author is very fond of cloud effects. They redeem a picture. They are almost necessary to a good study in black and white. To cut off nearly all one's sky because it is blank, may answer at times if the foreground is remarkably interesting. But a good sky is not only beautiful in itself. It also adds a sense of spaciousness and freedom.

Care must be taken with marines when the wind is toward the camera, that a bit of spray does not touch the lens and spoil the negative.

Salt water is seriously injurious to a bellows also, which is made up of glue. The best negatives are made after a storm, when the wind blows off shore, not only saving one's instrument, but by blowing off the crests of the waves adding to the charm of the result.

One should carefully try to exclude persons from any outdoor picture, unless those persons are engaged in legitimate pursuits, so as to add to the composition. A beach of bathers is one thing; a marine another.

Plate 101. "Stepping Stones." A representation of something that does not exist in America. Leading up as these ancient stones—set here, it is said, five hundred years ago,—to a notably fine example of a thatched house, with walled garden, on the farther bank, they afford that sort of a composition which tells a story. One inevit-

ably, perhaps unconsciously, passes along the way pointed out by the picture to the obvious journey's end,—the rest, sweetness and charm to be found at the cottage. It is this play of mind and affection that should be called out by pictures.

Plate 102. "The Altar" shows very well an old wall paper, perhaps as good a design as ever was seen. The curious fact is that pictures of wall paper are more pleasing than the paper itself. Owing to the reduced size of the picture the somewhat crude design and color is last in the excellence of the composition.

Plate 103. "The Nest," in the Sherwood Forest, made in the time of the milk white thorn blossoms fills the heart's demand for a home sense.

Plate 104. "Below the Arches" is an instance in which the part is more interesting than the whole. The picture is more impressive from being made below the bridge, and near enough to suggest strength, though strength made beautiful by wild decoration.

Plate 105. "Lorna Doone Brook." The title adds here to the intrinsic interest of a scene in Dartmoor. The brook is near the church and the home of John Ridd. Incidentally it was made in a hard rain, and there was difficulty in developing a good negative.

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